

MAY 8 1962

CRPL-F 212 PART B

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FOR OFFICIAL USE

PART B
SOLAR - GEOPHYSICAL DATA

ISSUED
APRIL 1962

U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

SOLAR - GEOPHYSICAL DATA

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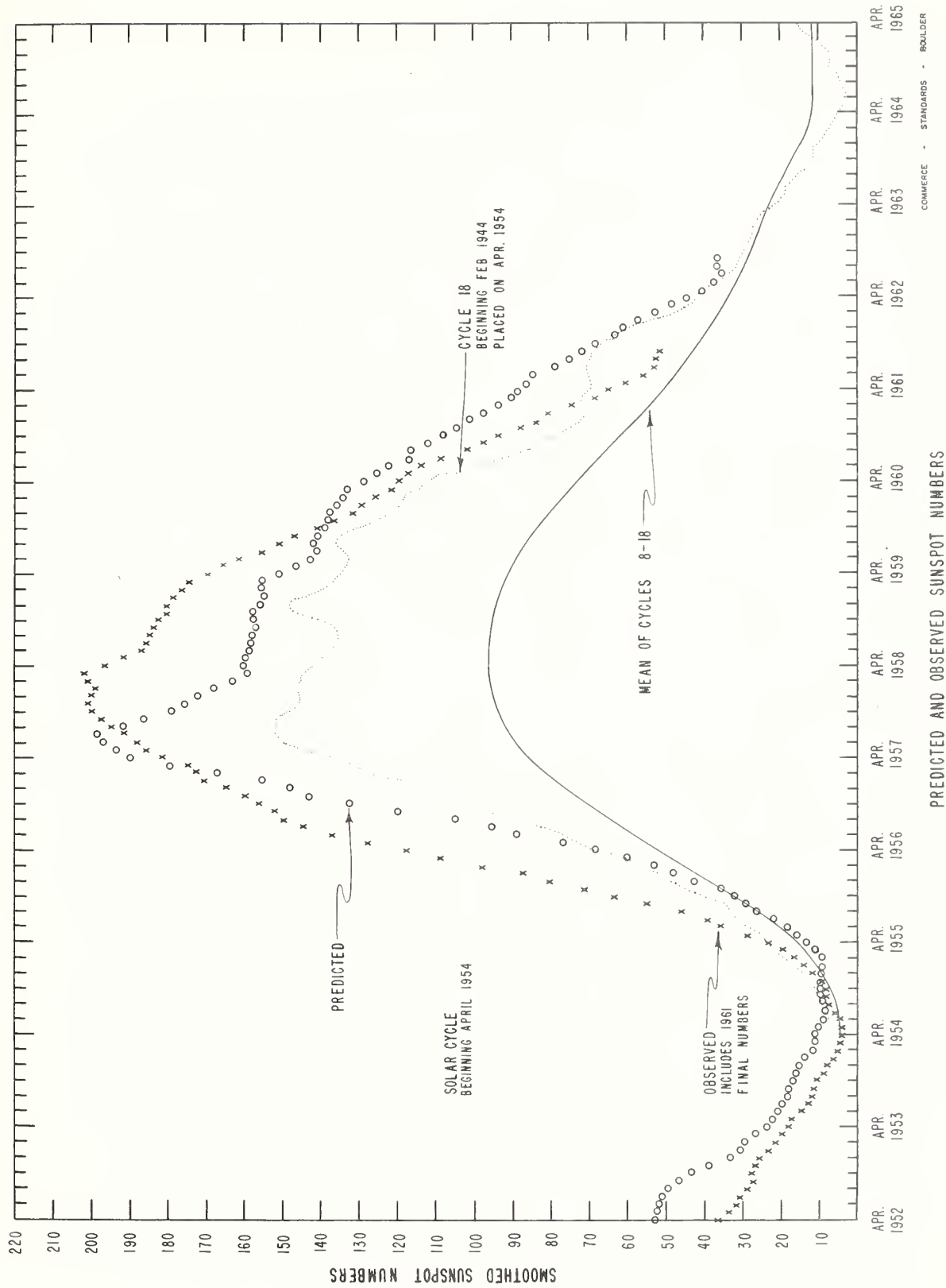
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The descriptive text was republished November 1961.
Addenda to the text were published February 1962.

Feb. 1962	American Relative Sunspot Numbers R_A'
1	70
2	67
3	47
4	45
5	42
6	24
7	33
8	21
9	19
10	11
11	3
12	3
13	8
14	17
15	18
16	15
17	15
18	22
19	33
20	49
21	56
22	80
23	82
24	88
25	58
26	71
27	77
28	80
Mean:	41.2

Mar. 1962	Zürich Provisional Relative Sunspot Numbers R_Z	Daily Values Solar Flux at 2800 Mc, Ottawa, Canada Flux
1	74	121
2	66	112
3	58	100
4	37	89
5	15	86
6	26	81
7	28	80
8	18	77
9	15	79
10	7	76
11	0	78
12	8	82
13	12	81
14	13	82
15	22	84
16	20	86
17	28	94
18	36	98
19	61	116
20	75	118
21	86	127
22	94	128
23	84	130
24	79	126
25	74	128
26	71	118
27	48	117
28	38	109
29	37	103
30	44	99
31	38	92
Mean:	42.3	99.9



CALCIUM PLAGE AND SUNSPOT REGIONS

MARCH 1962

CMP Mar. 1962	Lat	McMath Plage Number	Return of Region	Calcium Plage Data				Sunspot Data		
				CMP Values		History, Age		CMP Values		History
				Area	Int.			Area	Count	
04.0	N08	6354	6334	3700	2.5	$\ell \searrow \ell$	3	20	1	$\ell - \ell$
05.1	N08	6355	6335	1300	2	$\ell - \ell$	3	80	3	$\ell - \ell$
06.8	N13	6356	6335	400	2	$\ell \searrow d$	3			
06.8	N12	6358	*	1100	2.5	$b \nearrow \ell$	1	60	1	$b \wedge d$
08.4	S07	6357	**	600	2	$\ell \searrow d$	1			
08.4	N07	6359 A	***	(200)	(1.5)	$b - d$	1			
08.4	N07	6359 B	***	(200)	(1.5)	$b - d$	1			
11.8	N39	6364	***	200	1	$b \wedge d$	1			
11.9	N20	6360	***	200	1	$b \wedge d$	1			
12.4	S03	6365	***	200	1.5	$b \wedge d$	1			
14.4	S17	6362	***	(200)	(1)	$b \searrow d$	1			
15.4	N17	6361	6342	(800)	(1)	$\ell - \ell$	7			
17.4	S14	6363	New	400	2	$\ell \searrow d$	1			
18.4	N09	6366	New	2200	3	$\ell - \ell$	1	50	1	$\ell - \ell$
18.4	S06	6367	6349	1400	2	$\ell \searrow \ell$	4			
19.2	S22	6371	***	(400)	(2)	$b \wedge d$	1			
20.2	N07	6368	6348	1300	2	$\ell \searrow \ell$	7	(10)	(1)	$\ell \searrow d$
22.3	S04	6375	***	(400)	(1.5)	$b \wedge d$	1			
23.5	N08	6370	6352	2400	3	$\ell - \ell$	3	100	6	$\ell - \ell$
24.2	S02	6372	6351	1100	2	$\ell - \ell$	2	20	1	$b \nearrow \ell$
25.0	S13	6369	6351	7000	3	$\ell - \ell$	2	(10)	(1)	$\ell \searrow d$
25.6	N12	6373	6352	5000	3.5	$\ell - \ell$	3	970	14	$\ell - \ell$
26.1	S33	6376	***	(300)	(1.5)	$b \wedge d$	1			
27.3	N16	6374	****	1200	3	$\ell - \ell$	1	(20)	(2)	$\ell \searrow d$
31.1	N08	6377	+	1600	2.5	$\ell - \ell$	1			
31.5	S15	6378	New	1000	2.5	$\ell - \ell$	1			

COMMERCE - STANDARDS - BOULDER

- * New in position of 6339
 ** New in position of 6337
 *** New, small and ephemeral
 **** New in position of 6353
 + Resurgence of 6354.

MARCH 1962

Mar. 1962	Time Meas.	Lat.	Mer. Dist.	Type		Mar. 1962	Time Meas.	Lat.	Mer. Dist.	Type
3	1705	N10 S09 N08 N07 N11	W72 W67 E02 E12 E23	α f β p* β f α p α f+		29	2455	N09 N13 S13	W62 E11 E15	β α p β f+
8	1830	N07 N12 N14	W54 W25 W18	α p α p α f		30	1640	N10 N14 N13 S13 S08	W71 W67 E01 E05 E52	β γ α p α p β p
13	2340	N12	E60	α f		31	1905	N10 N13	W80 W12	β γ β p
14	1825	N12	E50	γ				N04 S07	W04 E33	α p α p
15	1830	N12	E37	γ						
26	1650	N10 S11 N10	W50 W29 W17	β p α p β f						

* Reversed polarities

+ Very faint

COMMERCE - STANDARDS - BOULDER

FINAL CORONAL LINE EMISSION INDICES

OCTOBER 1961

CMP Oct 1961	North East Quadrant (observed 7 days earlier)				South East Quadrant (observed 7 days earlier)				South West Quadrant (observed 7 days later)				North West Quadrant (observed 7 days later)			
	G ₆	G ₁	R ₆	R ₁	G ₆	G ₁	R ₆	R ₁	G ₆	G ₁	R ₆	R ₁	G ₆	G ₁	R ₆	R ₁
1	80	110	17	27	24	45	12	20	23	31	12a	18a	99	146	22a	43a
2	69	98	21a	24a	22	42	28a	35a	x	24	x	x	x	x	x	x
3	38	47	7	11	23	31	9	16	70	124	15	47	73	101	12	24
4	30	36	15	24	22	34	12	16	45	78	25	44	27	31	16	18
5	44	53	17	32	33	48	10	16	44	57	8	13	34	45	10	19
6	72	93	6	15	50	64	1	4	25	39	11	16	54	101	12	24
7	53a	81a	5a	15a	20a	31a	1a	3a	28	39	18	28	61	104	21	41
8	90	167	6a	10a	43	63	4a	5a	37	48	16	20	62	75	33	64
9	67	90	7	12	23	36	9	13	77	115	x	x	77	115	x	x
10	47a	68a	12	22	44a	64a	25	50	84	126	27	50	66	121	16	28
11	71	101	17	34	68	112	25	43	82	128	13	32	73	90	9	12
12	86	162	x	x	51	73	x	x	55	73	15a	24a	55	87	13a	28a
13	70	132	x	x	23	34	12	x	34	56	3	4	70	109	8	12
14	46	73	16	28	10	44	12	14	19	48	7a	10a	48	70	12a	15a
15	49	70	10	14	10	44	4	7	9a	10a	12a	15a	41a	68a	15a	25a
16	x	x	x	x	x	x	x	x	11	17	13	22	57	92	19	30
17	83	144	17	25	17	22	9	11	12	17	14	23	60	76	17	30
18	61	90	32	56	11	20	24	28	15	34	10	15	41	46	11	13
19	39a	65a	25	35	8a	16a	8	10	18	30	9	17	37	46	11	19
20	67	101	29	48	18	31	15	22	x	x	x	x	x	x	x	x
21	34	47	17	24	21	39	12	20	26	33	6	8	40	43	6	9
22	33	48	20	24	20	24	19	29	x	x	x	x	x	x	x	x
23	x	x	20a	52a	x	x	19a	24a	58	118	9	24	56	95	4	10
24	63	115	34	56	39	62	40	62	40	49	x	x	55	84	x	x
25	69	104	11	18	42	78	17	28	x	x	6	8	x	x	13	20
26	47	70	31a	40a	11	44	27a	36a	x	x	x	x	x	x	x	x
27	63	78	10	13	20	39	7	7a	8	12	11	20	20	30	12	20
28	62	101	11a	20a	18	28	5a	7a	12a	20a	11a	15a	35a	60a	9a	12a
29	68a	104a	7a	10a	x	x	6a	7a	24	36	10a	10a	51	81	10a	15a
30	69	98	10	15	48	87	6	8	37	64	12a	14a	30	42	15a	24a
31	37	45	7	9	49	84	8	11	61	96	9	10	48	59	10	44

COMMERCE - STANDARDS - BOULDER

x = no observations

a = index computed from low weight data

* = yellow line observed

FINAL CORONAL LINE EMISSION INDICES

NOVEMBER 1961

CMP Nov 1961	North East Quadrant (observed 7 days earlier)				South East Quadrant (observed 7 days earlier)				South West Quadrant (observed 7 days later)				North West Quadrant (observed 7 days later)			
	G ₆	G ₁	R ₆	R ₁	G ₆	G ₁	R ₆	R ₁	G ₆	G ₁	R ₆	R ₁	G ₆	G ₁	R ₆	R ₁
1	30	34	6	7	42	77	6	9	23	28	12	20	22	25	18	28
2	31	38	5	9	32	41	7	9	27	36	9a	12a	40	67	20a	60a
3	37a	52a	5a	7a	17a	20a	4a	7a	30a	70a	8a	10a	29a	40a	6a	10a
4	62	88	8	11	35	46	6	17	19a	28a	17a	20a	64a	90a	19a	52a
5	x	x	x	x	x	x	x	x	43a	72a	9a	12a	31a	44a	10a	15a
6	64	84	7a	10a	64	112	5a	5a	78	140	19	28	54	95	23	36
7	62	73	11a	16a	79	110	16a	28a	56	84	11a	11a	38	53	13a	16a
8	43	58	6	7	56	92	10	22	48	62	13	24	58	98	16	28
9	55	76	x	x	46	89	x	x	23	31	5a	5a	54	87	14a	27a
10	44	62	19a	40a	33	44	7a	8a	19	25	9	14	50	70	25	38
11	34a	48a	16a	30a	6a	8a	9a	10a	17	19	17	23	59	108	24	35
12	54	106	21a	30a	8	11	12a	15a	14	18	11a	12a	50	82	15a	22a
13	66	123	11a	18a	8	11	6a	8a	10	16	10	13	42	52	10	16
14	118	151	14	19	14	25	9	12	x	x	x	x	x	x	x	x
15	74	120	28	46	11	17	13	16	x	x	x	x	x	x	x	x
16	45	89	10a	12a	13	25	8a	12a	17	22	11	18	49	90	17	28
17	21a	24a	8a	10a	8a	12a	8a	10a	22	29	8a	10a	40	48	7a	10a
18	18a	20a	12a	15a	12a	16a	12a	15a	29	40	4	9	36	47	2	13
19	19a	28a	8a	10a	15a	18a	7a	10a	x	x	x	x	x	x	x	x
20	47	65	16	32	38	70	15	18	x	x	17	20	27a	31a	17	20
21	37	53	13a	16a	19	31	13a	16a	15	17	9a	12a	35	39	6a	8a
22	37	47	10a	20a	14	17	12a	18a	x	x	x	x	28	x	x	x
23	20	25	5a	5a	11	14	7a	10a	15	21	14	16	33	33	10	13
24	28	37	5	11	22	38	10	12	20	23	11a	12a	29	39	12a	20a
25	34	37	9	15	30	34	11	17	x	x	x	x	x	x	x	x
26	31	38	5a	5a	28	37	7a	10a	x	x	x	x	x	x	x	x
27	26	29	6	8	29	48	6	10	24	31	17	21	26	31	11	15
28	x	x	x	x	x	x	x	x	23	31	7	8	27	30	14	20
29	x	x	x	x	x	x	x	x	49	126	10	13	57	100	11	21
30	67	126	25	40	19	31	7	16	27	48	15	20	64	132	25	48

x = no observations

a = index computed from low weight data

* = yellow line observed

COMMENCE - STANDARDS - BOULDER

FINAL CORONAL LINE EMISSION INDICES

DECEMBER 1961

CMP Dec 1961	North East Quadrant (observed 7 days earlier)				South East Quadrant (observed 7 days earlier)				South West Quadrant (observed 7 days later)				North West Quadrant (observed 7 days later)			
	G ₆	G ₁	R ₆	R ₁	G ₆	G ₁	R ₆	R ₁	G ₆	G ₁	R ₆	R ₁	G ₆	G ₁	R ₆	R ₁
1	84	108	14a	25a	33	61	5a	5a	x	x	x	x	x	x	x	x
2	80	122	16	43	36	59	3	11	39	83	15	35	58	93	15	25
3	x	x	x	x	x	x	x	40a	x	x	x	x	x	x	x	x
4	43a	67a	20a	30a	41a	76a	26a	40a	x	x	x	x	x	x	x	x
5	34	48	10a	11a	21	31	7a	10a	37	56	19	40	55	95	23	36
6	x	x	x	x	x	x	x	x	14	20	20	28	35	59	21	28
7	55	108	12	16	33	52	7	10	11	17	12	18	40	76	9	12
8	43	78	10	24	17	21	10a	15a	4	6	12	18	38	56	14	24
9	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
10	x	x	x	x	x	x	x	x	8	12	21	35	26	40	18	37
11	72	118	17	32	16	28	11	16	20	24	14	18	43	54	15	24
12	41	48	10	27	11	14	2	5	12	18	6	8	36	42	4	6
13	56	123	18	46	13	20	8	10	11	22	33	47	32	78	49	115
14	40	59	29	60	10	11	16	20	17	26	17	22	29	60	11	15
15	x	x	x	x	x	x	x	x	15	17	10a	11a	29	34	15a	32a
16	41	67	6	9	22	34	7	9	19	22	12a	26a	23	28	3a	4a
17	x	x	x	x	x	x	x	x	21	42	18a	28a	21	31	4a	10a
18	35	52	x	x	18	24	x	x	14	20	24a	28a	24	28	5a	10a
19	42	53	16	26	16	33	33	56	14	26	x	x	15	20	x	x
20	37	39	59	120	11	25	22	26	47	40	x	x	22	39	x	x
21	41	53	25	44	16	45	15	20	18	40	15	30	23	49	16	30
22	28	42	13	18	16	28	12	18	13	24	15	22	30	56	17	45
23	x	x	x	x	x	x	x	x	13	20	11	12	27	52	11	20
24	25	40	33	55	8	14	24	30	30	45	8	12	30	45	5	6
25	36	40	14	21	29	36	12	16	25	40	10	19	9	14	4	7
26	38	53	3	6	32	44	3	7	69	120	18a	28a	75	109	18a	25a
27	122	200	42	65	99	165	43	60	62	109	24	32	89	137	42	78
28	48	76	24	37	41	56	19	27	14	28	4	5	22	38	7	15
29	62	81	16	28	52	81	14	32	x	x	x	x	x	x	x	x
30	71	115	27a	44a	45	84	13a	36a	x	x	x	x	x	x	x	x
31	70	112	20a	40a	34	59	15a	22a	34	40	8	10	43	72	8	11

COMMERCE - STANDARDS - BOULDER

x = no observations

a = index computed from low weight data

* = yellow line observed

PROVISIONAL CORONAL LINE EMISSION INDICES

MARCH 1962

CMP Mar 1962	North East Quadrant (observed 7 days earlier)				South East Quadrant (observed 7 days earlier)				South West Quadrant (observed 7 days later)				North West Quadrant (observed 7 days later)			
	G ₆	G ₁	K ₆	R ₁	G ₆	G ₁	R ₆	R ₁	G ₆	G ₁	R ₆	R ₁	G ₆	G ₁	R ₆	R ₁
1	x	20	x	35	x	8	x	15	x	x	x	x	x	x	x	x
2	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
3	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
4	x	x	x	70	x	6	18	25	x	x	x	15	x	x	x	x
5	15	44	26		3				12	15	11		14	25	11	25
6	6	8	13	25	2	4	11	20	x	x	x	x	x	x	x	x
7	5	6	x	x	5	10	x	x	x	9	x	x	15	38	x	x
8	9	12	8	15	7	20	8	12	7	11	13a	24a	11	16	10a	18a
9	5	8	7	10	5	8	9	15	3	3	20	32	8	11	29	39
10	x	x	x	x	x	x	x	x	30	42	5	8	16	30	6	8
11	10a	14a	11a	16a	6a	6a	11a	13a	2	4	10	12	2	4	19	25
12	x	x	x	x	x	x	x	x	3	6	24a	28a	10	11	26a	37a
13	10	17	x	x	5	6	x	x	x	x	x	x	x	x	x	x
14	x	x	x	x	x	x	x	x	5	8	5	5	x	10	3	5
15	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
16	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
17	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
18	x	x	x	x	x	x	x	x	8a	25a	x	7	x	x	x	x
19	16	20	10	12	6	13	12	17	15	31	15a	20a	33a	44a	13a	15
20	x	x	x	x	x	x	x	x	x	x	x	x	44	90	x	20a
21	38	54	x	x	26	29	x	x	13a	30a	20a	26a	32a	36a	26a	60a
22	43	58	7	15	35	43	8	24	4	6	13	20	5	8	18	32
23	55	81	19a	36a	40*	59	28a	44a	x	x	x	x	x	x	x	x
24	14	25	8	10	19*	40	7	10	12	14	19	30	13	16	16	27
25	8	10	5	5	5*	12	5	5	49	67	22	40	77*	109	25	40
26	49	81	48a	95a	28	50	46a	98a	x	x	x	x	x	x	x	x
27	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
28	11	14	5	7	5	6	4	5	x	x	x	x	x	x	x	x
29	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
30	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
31	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

COMMENCE - STANDARDS - BOULDER

x = no observations

a = index computed from low weight data

* = yellow line observed

SOLAR FLARES

MARCH 1962

OBSERVATORY	DATE MAR 1962	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT		
		START	END	APPROX. LAT.	MER. DIST.				MC-MATH FLAGE REGION	TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.		MAX WIDTH Ha	MAX INT. %
LOCKHEED	01	0016	0045	0022	S07 W30		1-	2	0022	1.10	1.10	1.10	10	S-SWF	
	01	0115	0915	NO FLARE	REPORT										
	01	0930	1200	NO FLARE	REPORT										
	01	1203	1227		S09 W36	6351	24 D	1	1209	2.40	3.00	3.00			
	01	1306	1337		S14 W55	6351		1-	1306	.90	1.50	1.50			
	01	1634	1720	1644	S13 W56	6351	46 D	2	1643	8.09	10.97	10.97	34		
	01	1636	1730	1643	S14 W56	6351	54	2+	1643	5.00	9.00	9.00			
	01	1645	1725	1646	S13 W57	6351	40 D	2	1646	4.10	5.70	5.70	30		
	01	1816	1838	1821	S09 W41	6351		1-	1821	.30	.30	.30	10		
	01	1844	1848		S09 W41	6351		1-	1846	.20	.30	.30			
MITAKA	01	1943	1948	1944	S13 W59	6351	1-	1	1944	.20	.30	.30			
	01	1948	2000	1953	S09 W41	6351	1-	1	1953	.20	.20	.20	10		
	01	1952	2000	1954	S09 W42	6351	1-	1	1954	.20	.30	.30			
	01	2005	2020	2010	S14 W50	6351	1-	1	2010	.30	.40	.40	10		
	01	2124	2206	2158	S08 W42	6351	42	1	2136	3.18	3.59	3.59	22		
	01	2131	2141	2136	S09 W43	6351	1-	1	2136	.20	.30	.30			
	01	2152	2213	2158	S08 W44	6351	1-	2	2158	.70	.80	.80	20		
	01	2218	2231	2222	S09 W50	6351	1-	1	2222	.50	.60	.60	10		
	01	2341	0010	2347	S08 W45	6351	8	1-	2347	.70	.80	.80	10		
	01	2352	2400	2354	S08 W42	6351		1	2354	1.18	1.60	1.60	96		
MITAKA	02	0130	0143	0131	S08 W45	6351	13 D	1	0131	1.01	1.35	2.60	134		
	02	0430	0445	NO FLARE	REPORT										
	02	0500	0915	NO FLARE	REPORT										
	02	1030	1300	NO FLARE	REPORT										
	02	1850	1911	1854	S08 W86	6351		1-		.62			17		
	03	0000	0030	NO FLARE	REPORT										
	03	0530	0700	NO FLARE	REPORT										
	03	0759	0805	D	S11 W81	6351	120 D	1-							
	03	0800	1000	D	S15 W80	6351		1-							
	03	1327	1337	1329	S14 W86	6351		1-	1329	.20	.60	.60			
MITAKA	03	1612	1627	1615	S14 W80	6351		1-	1615	.20	.80	.80	10		
	03	1654	1716	1702	S13 W80	6351		1-	1702	.40	1.20	1.20	10		
	03	1656	1715	1700	S14 W80	6351		1-	1700	.30	1.00	1.00			
	03	2018	2050	2027	S13 W90	6351		1-	2027	.20	1.00	1.00	10		
	03	2032	2045	2037	N13 W77	6351		1-	2037	.30	.80	.80	10		
	04	0040	0053	0045	S12 W90	6351		1-	0045	.20	1.00	1.00	20		
	04	0103	0115	0110	S12 W90	6351		1-	0110	.30	1.50	1.50	20		
	04	0151	0453		S10 W90	6351	182 D	1	0217				100		
	04	0205	0220	D	S11 W90	6351	15 D	1				6.18			
	04	0309	0320		S11 W90	6351	11 D	1							
MITAKA	04	0426	0441		S11 W90	6351	15 D	1							
	04	0600	0945	NO FLARE	REPORT										
	04	0819	0821	D	S10 W90	6351		1-							
	04	1300	1315	NO FLARE	REPORT										
	04	1345	1400	NO FLARE	REPORT										
	04	2007	2014	2012	S12 W90	6351		1-	2012	.20	1.00	1.00	20		
	05	0000	0015	NO FLARE	REPORT										
	05	0030	0100	NO FLARE	REPORT										
	05	0245	0515	NO FLARE	REPORT										

SOLAR FLARES

MARCH 1962

OBSERVATORY	DATE	OBSERVED TIME		LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	TIME — UT	MEASUREMENTS			PROVISIONAL IONOSPHERIC EFFECT
		START	END	MAX PHASE	APPROX. LAT.	MER DIST.								
	MAR 1962													
CAPRI S	05	0545	0715	NO FLARE	REPORT			1-	1	1447	1.00	1.10		
	05	0945	1430	NO FLARE	REPORT									
	05	1441 E	1447 D	NO FLARE	N08 W09									
	05	1845	1930	NO FLARE	REPORT									
	05	2300	2400	NO FLARE	REPORT									
	06	0000	1400	NO FLARE	REPORT									
	06	1415	1500	NO FLARE	REPORT									
	06	1545	1730	NO FLARE	REPORT									
	06	1945	2000	NO FLARE	REPORT									
	06	2215	2245	NO FLARE	REPORT									
	06	2300	2315	NO FLARE	REPORT									
	06	2330	2400	NO FLARE	REPORT									
	07	0000	0030	NO FLARE	REPORT									
	07	0130	0215	NO FLARE	REPORT									
	07	0300	0630	NO FLARE	REPORT									
LOCKHEED	07	0815	0830	NO FLARE	REPORT									
	07	1645	1700	NO FLARE	REPORT									
	07	1652	1715	1657	N07 W39			1-	2	1657	•20	•20	10	
	07	2240	2255	2247	N07 W02			1-	1	2247	•10	•10	20	
	07													
LOCKHEED	08	0445	0645	NO FLARE	REPORT									
	08	1600	1615	NO FLARE	REPORT									
	08	1830	1845	NO FLARE	REPORT									
	08	1844	1910	1852	N14 W21			1-	2	1852	•40	•40	10	
	08	2041	2112	2049	N13 W03			1-	2	2049	•40	•40	10	
MCMATH	08	2044	2052	2048	N14 W23			1-	2	2048	•30	•30	10	
	08	2110	2200	2128	N07 W69			1-	2	2128	2.50	4.70	10	
	08	2113	2131 D		N06 W70			1-	1	2135	•70	1.70		
	09	0030	0315	NO FLARE	REPORT									
	09	0400	0515	NO FLARE	REPORT									
LOCKHEED	09	0530	0845	NO FLARE	REPORT									
	09	1245	1500	NO FLARE	REPORT									
	09	1545	1815	NO FLARE	REPORT									
	10	0145	0745	NO FLARE	REPORT									
	10	1629	1710	1634	N07 W90			1	2	1634	•80	3.90	10	
LOCKHEED	10	1936	2030	1941	N09 W54			1-	2	1941	•30	•40	10	
	10	2040	2130	2110	N07 W90			1-	2	2110	•30	1.50	10	
	11	0300	0400	NO FLARE	REPORT									
	11	0415	0430	NO FLARE	REPORT									
	11	0500	0800	NO FLARE	REPORT									
LOCKHEED	11	0830	1445	NO FLARE	REPORT									
	11	1640	1653	1647	N10 W65			1-	2	1647	•10	•20	10	
	11	1852	1955 U	1908	N11 E90			1-	2	1908	•20	1.00	10	
	11	2026	2055 U	2032	N11 E90			1-	2	2032	•20	1.00	10	
	11	2112	2140	2120	N11 E90			1-	2	2120	•30	1.50	10	
LOCKHEED	11	2315	2400	NO FLARE	REPORT									

SOLAR FLARES

MARCH 1962

OBSERVATORY	DATE MAR 1962	OBSERVED UNIVERSAL TIME		LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS				PROVISIONAL IC NOSPHERIC EFFECT	
		START	END	APPROX. LAT.	MER. DIST	MC-MATH PLACE REGION				TIME U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH He		MAX. INT °s
LOCKHEED	12	0000	0030	NO FLARE	REPORT										
	12	0215	0345	NO FLARE	REPORT										
	12	0630	0745	NO FLARE	REPORT										
	12	0815	0945	NO FLARE	REPORT										
	12	1015	1330	NO FLARE	REPORT										
	12	2227	2240	2230	N11 E79		1-	2	2230	.30	.80		20		
WENDEL [ONDREJOV HERSTMONEU	13	0330	0645	NO FLARE	REPORT										
	13	1230	1245	NO FLARE	REPORT										
	13	1300	1330	NO FLARE	REPORT										
	13	1345	1400	NO FLARE	REPORT										
	13	1410 E	1420 D		N10 E67	6366	1				3.00				
	13	1448 E	1601 D		N06 E66	6366	2+				15.00				
SALTSJOBADN	13	1454 E	1610 D		N11 E67	6366	2+								
	13	1503 E	1555	1505	N27 E65	6366	2				2.20	5.10		5.00	S-SWF
	13	1615	1700	NO FLARE	REPORT										
	14	0000	0030	NO FLARE	REPORT										
	14	0215	0600	NO FLARE	REPORT										
	14	1500	1630	NO FLARE	REPORT										
MITAKA	15	0015	0745	NO FLARE	REPORT										
	15	0930	1400	NO FLARE	REPORT										
	15	1316 E	1322 D		N12 E38		1-	3	1319	1.00	1.40				
	16	0356 E	0418	0358	N12 E30	6366	1				2.31	2.84		3.78	S-SWF
	16	0530	0630	NO FLARE	REPORT										
	16	2245	2315	NO FLARE	REPORT										
IKOMASAN	17	0100	0115	NO FLARE	REPORT										
	17	0130	0500	NO FLARE	REPORT										
	17	0522 E	0532 D		S10 E90	6369	1								
	17	0530	0630	NO FLARE	REPORT										
	17	0705 E	0716		N13 E13		1-								
	17	1035 E	1150 D		N09 E15	6366	2				1.50	1.80			
CAPRI S [SALTSJOBADN CAPRI S	17	1042 E	1052 D		N13 E12	6366	1				5.00	5.40			
	17	1230	1300	NO FLARE	REPORT						3.90	4.30			
	17	1305	1316	1310	N11 E12	6366	1-				.30	.30			
	17	1321	1333	1323	N12 E10	6366	1-				.60	.70			
	17	1846	1901 U	1851	S14 E90		1-				.10	.50		20	
	17	1934	1959	1941	S09 E90	6369	1				.80				
MCMATH [LOCKHEED SAC PEAK LOCKHEED SAC PEAK	17	1936	2003	1944 U	S14 E90	6369	2				5.50			20	
	17	1938	1942	1940	S10 E90		1-				.62	.62		24	
	17	1950	1954	1952	S09 E90		1-				.45	.45		22	
	17	2131	2143	2133	N11 E02		1-				.60	.60		20	
	17	2238	2246	2240	N10 E75		1-				.58	1.18		19	
	17	2238	2246	2240	N10 E75		1-								
MCMATH [LOCKHEED SAC PEAK LOCKHEED SAC PEAK	18	0515	0530	NO FLARE	REPORT										
	18	1540	1620		N10 E60	6370	1-				.80	1.70			
	18	1640	1646	1643	N10 E59	6370	1-				.10	.30		.20	
	18	1649	1730		N10 E59	6370	1-				.60	.60			
	18	1649	1730		N10 E59	6370	1-								
	18	1649	1730		N10 E59	6370	1-								

SOLAR FLARES

MARCH 1962

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT
		START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.				TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H _g	
MCMATH MCMATH [SAC PEAK MCMATH MCMATH SAC PEAK I KOMASAN	MAR 1962													
	18	1945	2000	1950	N09 E90			1-	2	1950	.20			
	18	2052	2104	2100	N08 E90			1-	2	2100	.20			
	18	2102	2112	2108	N10 E57			1-	3		.47	.70		17
	18	2102	2256	2114	N12 W04		114	1	3		3.90	3.88		25
	18	2103	2131 D	2113	N13 W05		28 D	1	3	2112	3.00	3.00		
	18	2106	2115	2109	N10 E56			1-	2	2109	.30	.60		
	18	2238	2252	2242	N10 E56			1-	3		.58	.83		17
	19	0100	0125 D	0107	N08 E90		25 D	1		0107				85
	19	0245	0300	NO FLARE	REPORT									
WENDEL WENDEL WENDEL WENDEL WENDEL WENDEL WENDEL MCMATH MCMATH MCMATH	20	0000	0615	NO FLARE	REPORT									
	20	1125	1141 D		N08 E62		16 D	1				3.00		
	20	1153 E	1159 D		N13 W26			1-						
	20	1251 E	1300 D		N11 W30			1-						
	20	1255 E	1304 D		N10 E30			1-						
	20	1256	1315 D		N08 E61		19 D	1				3.00		
	20	1333 E	1346 D		N07 E58			1-						
	20	1354 E	1401 D		N10 E29			1-						
	20	1617 E	1628	1620	S11 E53			1-	2	1620	.70	1.30		
	20	1625	1631	1627	N12 E28			1-	2	1627	.30	.40		
WENDEL WENDEL [ONDREJOV WENDEL [ONDREJOV WENDEL WENDEL WENDEL MCMATH	20	1713	1722	1716	N10 E60			1-	2	1716	.40	.80		
	20	2115	2400	NO FLARE	REPORT									
	21	0000	0045	NO FLARE	REPORT									
	21	0100	0645	NO FLARE	REPORT									
	21	0854 E	0904 D		N11 W31			1-						
	21	1205 E	1213 D		N11 W30			1-						
	21	1218	1239 D		S10 E38		21 D	1				4.00		
	21	1219	1232 D		S08 E38		13 D	1	1	1221			2.80	
	21	1234	1315		N10 E20		41	2				9.00		
	21	1240 E	1314 D		N10 E19		34 D	1+	1	1251			3.10	
ONDREJOV WENDEL WENDEL WENDEL MCMATH ONDREJOV ONDREJOV [SALTSJOBADN	21	1318 E	1328 D		S12 E44			1-	2		.29	.31		17
	21	1608	1616	1610	S04 E41			1-						
	21	1621 E	1628 D		N10 E16			1-						
	21	1623 E	1633 D		S12 E42			1-						
	21	1812	1819	1814	N11 W39			1-	1	1814	.30	.50		
	21	1900	1930	NO FLARE	REPORT									
	21	2100	2145	NO FLARE	REPORT									
	21	2215	2230	NO FLARE	REPORT									
	21	2300	2315	NO FLARE	REPORT									
	22	0000	0045	NO FLARE	REPORT									
ONDREJOV ONDREJOV [SALTSJOBADN	22	0130	0630	NO FLARE	REPORT									
	22	0900	0915	NO FLARE	REPORT									
	22	0918 E	0925 D		S17 E28		37 D	1-	1	0918			2.30	
	22	1019 E	1056 D		N05 E39		72 D	1	3	1033			2.50	
	22	1050 E	1202 D		N07 E39			2	3	1100	4.00	5.00		

SOLAR FLARES

MARCH 1962

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS				MAX. WIDTH He	MAX. INT. %	PROVISIONAL IONOSPHERIC EFFECT
		START	END	APPROX. LAT.	LOCATION					TIME U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.				
					MER. DIST.	McMATH PLACE REGION										
SAC PEAK	MAR 1962	22	1145	1200	NO FLARE	REPORT		1-	3		.54	.52			15	
	22	1438	1444	1440		N09 E15		1-	3		1.55	1.57			18	
	22	1558	1610	1602		N07 E29		1-	3		.87	.85			17	
	22	1916	1920	1918		S08 E22		1-	2		1.24	1.36				
	22	1928	E	1952	D	N06 E35		1-	2	1932	1.44	1.59				
	22	2108	E	2122	D	N07 E35		1-	2	2110	1.88	1.90			19	
	22	2136	E	2154	U	N06 E34		1-	3		1.00	1.10			10	
	22	2137	E	2205	U	N08 E36		1-	1	2140	14.81	16.17			24	
	22	2220	U	2310	U	N07 E36	6370	3	3		.87	.89			19	
	22	2302	E	2308		N06 E25		1-	3							
LOCKHEED	23	0000	0100	NO FLARE		REPORT										
	23	0130	0630	NO FLARE		REPORT										
	23	0645	0815	NO FLARE		REPORT										
	23	0830	1400	NO FLARE		REPORT										
	23	1910	1920	D		S13 E07		1-	2	1917	.20	.20			10	
LOCKHEED	23	2115	E	2133		S13 E09		1-	2	2115	.70	.70			10	
	23	2118	2135	2121		N10 E21		1-	2	2121	.70	.70			20	
	23	2233	2243	2236		S08 E06		1-	2	2236	.40	.40			20	
LOCKHEED	24	0009	0034	0016		N06 E20		1-	2	0016	.80	.80			10	
	24	0010	E	0040	D	N05 E18		1-	2	0016	.82	.83			20	
	24	0104	0128	0111		N11 E19		1-	2	0111	.50	.50				
	24	0145	0600	NO FLARE		REPORT										
WENDEL	24	0638	E	0653		N08 E12	6373	1		15 D						
	24	0638	E	0702		N06 E16	6373	1		24 D						
	24	0723	0809	0809		N06 E17	6373	1+		46						
WENDEL	24	0724	0817	0733		N07 E12	6373	1+		53						
	24	0845	0900	NO FLARE		REPORT										
	24	1215	1230	NO FLARE		REPORT										
MC-MATH	24	1551	1635	1611		S15 W03	6369	1		1611	2.00	2.00			20	
	24	1559	1630	U		S13 W02		1-	2	1602	.70	.70				
	24	1559	1630	U		S13 W02		1-	2	1758	.40	.40			10	
MC-MATH	24	1753	1808	1758		N09 E08	6373	1-	3	1756	.35	.35			17	
	24	1754	1804	1756		N15 E11		1-	1	1847	.30	.30			10	
	24	1840	1852	1846		N08 E14		1-	3	1846	.30	.30			10	
SAC PEAK	24	1840	1907	1847		N09 E13		1-	2	1846	.30	.30			10	
	24	1841	1853	1846		N09 E15	6373	1-	2	1846	.30	.30			10	
	24	1953	2005	1956		N09 E13		1-	1	1956	.30	.30			10	
LOCKHEED	24	2115	2126	2119		N09 E13		1-	1	2119	.30	.30			10	
	24	2202	2212	2208		N08 E42		1-	3	2209	.33	.33			17	
	24	2204	E	2215		N09 E13		1-	1	2209	.40	.40			20	
LOCKHEED	24	2259	2308	2302		N09 E13		1-	1	2302	.30	.30			10	
	24	2315	2334	2319		N09 E05		1-	1	2319	.90	.90			20	
	24	2339	0028	2354		N09 E11		1-	1	2354	.40	.40			20	
LOCKHEED	24	2339	0028	2412		N09 E11		1-	1	2354	.40	.40			20	
	24	2339	0028	2412		N09 E11		1-	1	2354	.40	.40			20	
	24	2348	2356	2352		N08 E12		1-	3		.31	.31			18	
HONOLULU	25	0142	E	0240	D	0152	S14 W08	1		58 D						
	25	0330	0600	NO FLARE		REPORT										
	25	0845	0900	NO FLARE		REPORT										

MARCH 1962

OBSERVATORY	DATE	OBSERVED TIME		LOCATION			DURA- TION → MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT		
		START	END	MAX. PHASE	APPROX.					MC-MATH PLAGE REGION	TIME	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.		MAX. WIDTH Ha	MAX. INT. %
					LAT.	MER. DIST.										
MAR 1962	25	0930	1245	NO FLARE	REPORT	6373	31 D	1	2		4.00	4.00	4.00			
	25	1254 E	1325 D		N07 W02	6373	61 D	2	3		5.92	5.92	5.92	23		
	25	1405 E	1506	1436	N07 W03	6373	36 D	1+			8.00	8.00				
	25	1410 E	1446 D		N06 W02	6373		1-	1		1.50	1.50	1.50	10		
	25	1411 E	1415 D		N07 W04	6373		1-	2		.30	.30	.30			
	25	1606	1625	1608	N08 E02			1-	3		.43	.43	.43	17		
	25	1606	1626	1616	N08 E01			1-	3		.30	.30	.30			
	25	1607 E	1622 D		N08 E02	6373		1-	1		.30	.30	.30	18		
	25	1614	1628	1620	N12 W36			1-	3		.87	.87	.87	10		
	25	1616	1632	1623	N11 W35			1-	2		.60	.60	.60			
	25	1902	1924	1908	N10 W37	6370		1-	2		1.70	1.70	1.70	10		
	25	1902	1928	1910	N08 E00			1-	3		1.55	1.55	1.55	23		
	25	1903	1940	1909	N11 W35	6370	37	1	1		2.10	2.10	2.40	20		
	25	1906	1928	1913	N08 W00			1-	2		.50	.50	.50	10		
	25	1908	1924	1912	N10 W37			1-	3		.47	.47	.52	19		
	25	1909	1924	1924	N08 W01	6373		1-	2		.40	.40	.40			
	25	2011	2029	2013	N08 W01	6373		1-	2		.30	.30	.30	10		
	25	2014	2025	2017	N08 W00			1-	2		.50	.50	.50			
	26	0010	0050	0029	S14 W22			1-	1		1.00	1.00	1.00	10		
	26	0100	0130	NO FLARE	REPORT											
	26	0200	0430	NO FLARE	REPORT											
	26	0500	0615	NO FLARE	REPORT	6373	18 D	1+	1-	3		5.00	5.00			
	26	0809 E	0827 D		N07 W06			1-	1-			1.00	1.00			
	26	0814 E	0822 D		N10 W21			1-	1-							
	26	0821 E	0832 D		N07 W12	6373	21	1	1-			3.00	3.00			
	26	0906	0927		N07 W08			1-	1-							
	26	1011 E	1024 D		N10 W19			1-	1-	3				2.90		
	26	1144	1211	1146	N10 W18	6373	14 D	1	1-			3.00	3.00			
26	1145	1159 D		N06 W12	6373		1-	2			.20	.20				
26	1257	1312	1300	N09 W25			1-	2			.30	.30				
26	1424	1439	1429	N07 W12	6373		1-	3			.76	.76		18		
26	1426	1434	1428	N08 W26			1-	3			.87	.87		20		
26	1426	1440	1428	N09 W25			1-	3								
26	1431 E	1440 D		N09 W49			1-	3			.72	.72		19		
26	1530	1546	1536	N09 W48			1-	2			.70	.70				
26	1533	1553	1535	N10 W49	6370		1-	2			.80	.80				
26	1534 E	1545		N08 W51			1-	3			.27	.27		17		
26	1614	1618	1616	N09 W50	6370		1-	3			.20	.20				
26	1616	1620	1617	N08 W13			1-	1			.40	.40		10		
26	1643	1658	1651	N06 W15	6373		1-	2			.20	.20				
26	1850	1900	1852	N07 E10			1-	1			.30	.30		10		
26	1935	1946	1938	N09 W52	6370		1-	2			.20	.20				
26	1958	2007	2002	N11 W52			1-	1			.40	.40		10		
26	1958	2010	2003	N09 W54			1-	2			.39	.39		16		
26	2048	2054	2052	N11 W52			1-	1			.40	.40		10		
26	2103	2116	2108	N08 W16	6373		1-	2			.50	.50		10		
26	2121	2137	2127	N07 W16			1-	1			.30	.30				
26	2124	2134	2129	N07 W16			1-	2			.27	.27		20		
26	2124	2134	2126													
27	0018 E	0040 D	0030	S13 W24			1-	1			1.13	1.13	1.14			
HONOLULU																

SOLAR FLARES

MARCH 1962

OBSERVATORY	DATE MAR 1962	OBSERVED UNIVERSAL TIME		LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS			PROVISIONAL IONOSPHERIC EFFECT
		START	END	MAX PHASE	APPROX. LAT.	MER. DIST.				MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H _g	
WENDEL [SAC PEAK MCMATH MCMATH [LOCKHEED IKOMASAN	27	0814 E	0822 D		N11 W62			1-					
	27	0945	1245	NO FLARE	REPORT			1-	1	.31	.33		
	27	1610	1614 U		N07 W37			1-	2	.30	.50	16	
	27	1611	1621		N07 W37	6373		1-	2	.20	.30		
	27	2107	2117		N07 W39	6373		1-	2	.40	.50	10	
MCMATH MCMATH [LOCKHEED IKOMASAN	27	2320	2334		N06 W39			1-	2	.72		1.50	100
	27	2326	2332 D		N08 W41	6370	6 D	1					
	28	0630	1245	NO FLARE	REPORT								
	28	1315	1345	NO FLARE	REPORT								
	28	1421 E	1500 D		N09 E30	6377		1-	2	.30	.40		
MCMATH MCMATH [LOCKHEED IKOMASAN	28	1812 E	1820		N09 W50	6373		1-	1	.20	.30		
	28	2335	2339		N10 W42			1-	3	.21	.27	17	
	29	0100	0615	NO FLARE	REPORT								
	29	0645	0745	NO FLARE	REPORT								
	29	0900	0915	NO FLARE	REPORT								
SAC PEAK	29	1130	1230	NO FLARE	REPORT								
	29	1245	1345	NO FLARE	REPORT								
	29	1404	1421		N09 W90			1-	3	.31		20	
	29	2200	2245	NO FLARE	REPORT								
	30	0000	0015	NO FLARE	REPORT								
SAC PEAK SAC PEAK SAC PEAK MCMATH [SAC PEAK SAC PEAK [MCMATH LOCKHEED MCMATH	30	0145	1230	NO FLARE	REPORT								
	30	1330	1400	NO FLARE	REPORT								
	30	1431	1446		N11 W69			1-	3	.58	1.05	22	
	30	1458	1516		N12 W67			1-	3	.87	1.51	17	
	30	1523	1543		N07 W65			1-	3	.29	.47	17	
MCMATH SAC PEAK SAC PEAK [MCMATH LOCKHEED MCMATH	30	1555 E	1618 D		S19 W87	6369		1-	1	.20	.35	18	
	30	1604	1626		N07 W65			1-	3	.21	.91	23	
	30	1651	1753		N08 W68			1-	1	.20	.50	10	
	30	1707	1736		N07 W66	6373		1-	1	.20	.50		
	30	1709	1735		N12 W90			1-	2	.40	.70		
MCMATH MCMATH [MCMATH SAC PEAK [LOCKHEED MCMATH	30	1804	1812		N08 W66	6373		1-	2	.20	.50		
	30	1842	1856		N07 W66	6373		1-	1	.20	.50		
	30	2032 E	2050 D		S19 W90	6369		1-	1	.50	.72	19	
	30	2034	2054		S17 W90			1-	3	.60	1.80	10	
	30	2042 E	2050 D		S19 W90			1-	1	.40	1.00	18	
MCMATH [LOCKHEED MCMATH [MCMATH SAC PEAK [LOCKHEED SAC PEAK	30	2137 E	2202 D		N07 W68	6373		1-	1	.58	1.16	24	
	30	2146	2203		N08 W78			1-	3	.68	1.36	19	
	30	2210	2224		N08 W69			1-	3				
	30	2245	2257		N10 W75			1-	3				
	30	0513 E	0540 D		N08 W90	6370	27 D	1		.52	3.00	80	S-SMF
IKOMASAN IKOMASAN [WENDEL NERA WENDEL [WENDEL CAPRI S CAPRI S	31	0538 E	0542 D		N09 W70			1-				1.18	80
	31	0835 E	0850		N08 W71	6373	15 D	1					
	31	0840 E	0846		N10 W78	6373	6 D	1+	3				
	31	0902 E	0912 D		N12 W73			1-					
	31	0940 E	1057 D		N08 W73	6373	77 D	1		.70	3.00		
CAPRI S CAPRI S	31	1044 E	1100 D		N10 W78	6370	16 D	1		.60	4.20		
	31	1133 E	1205 D		N10 W79	6370	32 D	1			3.60		

COMMENCE - STANDARDS - BOULDER

SOLAR FLARES

MARCH 1962

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT	
		START	END	APPROX. LAT.	MER. DIST.				McMATH REGION	TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.		MAX. WIDTH H _g
	MAR 1962			NO FLARE	REPORT									
CAPRI S	31	1230	1245			87 D	1+	3	1430	.80	4.80			
LOCKHEED	31	1314 E	1441 D			32	1	2	1645	1.00	2.90		20	
SAC PEAK	31	1638	1710	1645	N10 W85	373	1	3		2.74			22	
MCMAH	31	1642	1701	1646	N08 W90	373	1	1	1646	.80				
LOCKHEED	31	1643 E	1714	1646	N08 W85	373	1	1			3.50			
LOCKHEED	31	1858	1930	1905	N10 W85	373	1	2	1905	1.20			20	
MCMAH	31	1858	1954	1905	N08 W85	373	1+	1	1905	2.50			22	
SAC PEAK	31	1859	1926	1905	N08 W90	373	1	3		2.31				
MCMAH	31	2008	2019	2014	N08 W86	373	1-	1	2014	.30				
SAC PEAK	31	2013	2102	2027	N08 W90		1-	3		.93			22	
MCMAH	31	2025	2054	2036	N08 W86	373	1	1	2036	1.20				
LOCKHEED	31	2030	2050	2038	N10 W85		1-	2	2038	.60	1.80		20	
HONOLULU	31	2042 E	2338 D	2050	N14 W89	373	1	1	2050	1.11	3.44			
MCMAH	31	2125 E	2153 D	2138	N08 W86	373	1	1	2138	1.20				
LOCKHEED	31	2130	2152	2139	N10 W85	373	1	2	2139	.90	2.70		20	
SAC PEAK	31	2131	2151	2139	N08 W90		1-	3		1.82			23	
SAC PEAK	31	2327	2343	2335	N08 W90		1-	3		1.16			22	
LOCKHEED	31	2330	2347	2337	N10 W85		1-	2	2337	.60	1.80		20	
IKOMASAN	31	2332	0010		N09 W90	6370	1		2346				110	

COMMERCE - STANDARDS - BOULDER

Note: Beginning with this issue of the CRPL-F Part B the intervals of no flare patrol observations have been entered chronologically with the flare-subflare listing. Because some observatories report flares, but not hours of operation, flares may be reported during these periods.

ATHENS	ATHENS, GREECE	HONOLULU	HAWAII, USA	NERA	NEDERHORST den BERGH,
BAKOU	PIRCULI, USSR	IKOMASAN	KYOTO, JAPAN		NETHERLANDS
CAPETOWN	ROYAL OBSERVATORY,	KIEV KO	KIEV GAO, USSR	NIZMIR	KRASNAYA PAKHRA, USSR
	CAPE OF GOOD HOPE	KIEV KY	KIEV UNIVERSITY, USSR	SAC PEAK	SACRAMENTO PEAK, N.MEX. USA
CAPRI F	CAPRI, ITALY (GERMAN)	LOCKHEED	LOS ANGELES, CALIF., USA	SALTSJÖBADEN	STOCKHOLM, SWEDEN
CAPRI S	CAPRI, ITALY (SWEDISH)	MCMAH	MCMAH-HULBERT	SCHAUINS	SCHAUINSLAND, GFR
CRIMEE	SIMEIZ, USSR		PONTIAC, MICH., USA	TASHKENT	TASHKENT, USSR
HERSTMONCEU	ROYAL GREENWICH OBSERVATORY,	MOSCOW	MOSCOW-GAISH, USSR	WENDEL	WENDELSTEIN, GFR
	HERSTMONCEUX, ENGLAND				

ALL VALUES IN THE MAXIMUM INTENSITY COLUMN FOR SAC PEAK ARE ARBITRARY UNITS (0-40) AND FOR LOCKHEED ARE ARBITRARY UNITS (10-40), NOT PERCENT OF CONTINUOUS SPECTRUM.

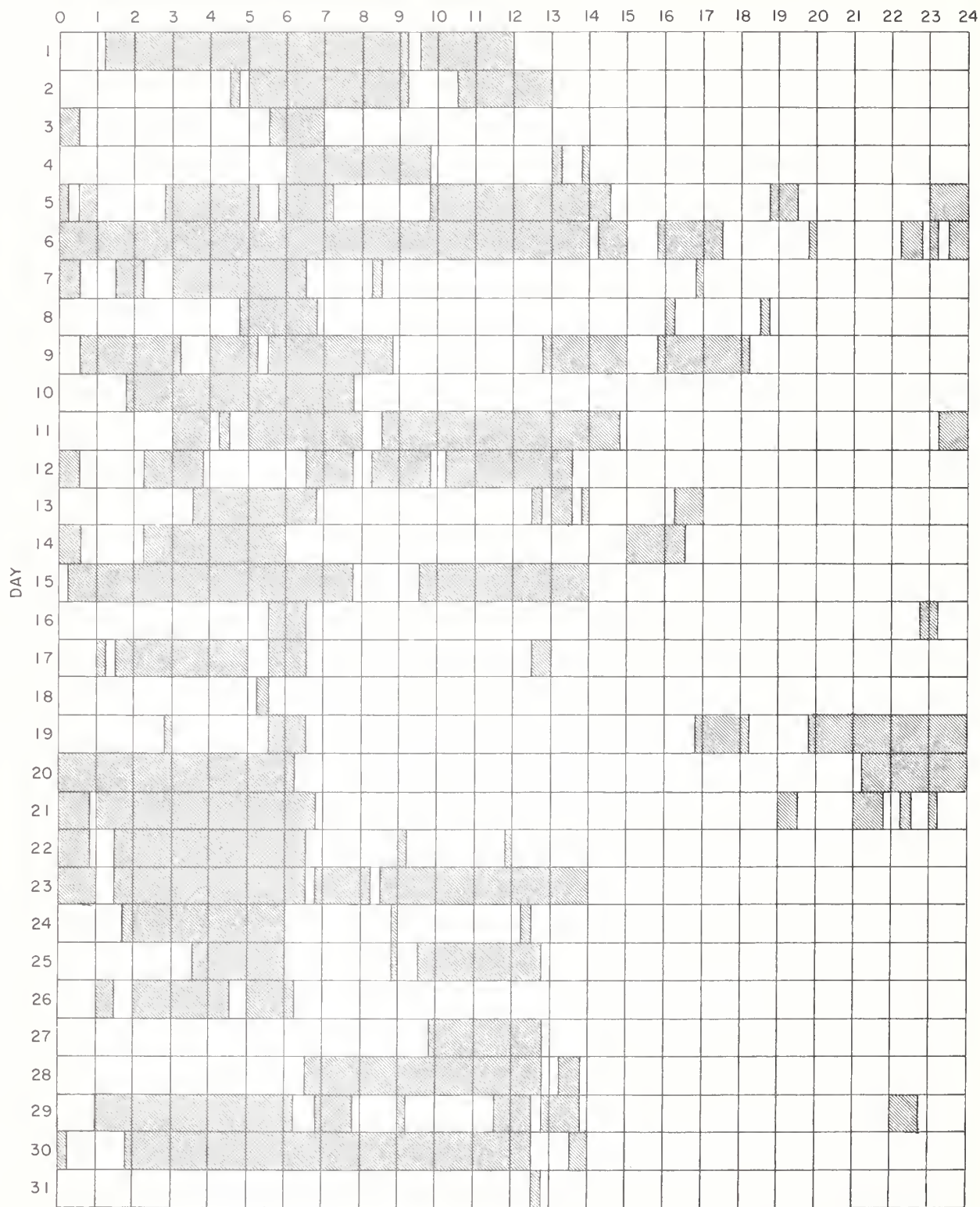
SEE DESCRIPTIVE TEXT PUBLISHED NOVEMBER 1961 FOR DEFINITION OF CORRECTED AREA VALUES LISTED FOR CLIMAX, HAWAII, LOCKHEED AND SACRAMENTO PEAK.

E = LESS THAN D = GREATER THAN U = APPROXIMATE □ = NOT REPORTED.

INTERVALS OF NO FLARE PATROL OBSERVATIONS

MARCH 1962

HOUR-UT



COMMERCE - STANDARDS - BOULDER

Stations Include:

Arcetri	Honolulu	Lockheed	Ondrejov
Capri (Swedish)	Huancayo	McMath-Hulbert	Sacramento Peak
Herstmonceux	Ikomasan	Mitaka	Wendelstein

SOLAR FLARES

DECEMBER 1961

OBSERVATORY	DATE DEC 1961	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT
									TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %
		START	END	APPROX. LAT.	APPROX. MER. DIST.	MC-MATH FLAGE REGION							
[HUANCAYO CAPETOWN BAKOU	01	1816	1840	N10	W10	6280	1	2	1821	1.30	1.40	4.50	
	03	0912	0952	N12	W39	6280	1		0921	2.00	2.60		
	03	0925	0949	N13	W39	6280	1	3	0930	2.37	3.23		58
	04	0506	0531	N11	W50	6280	1		0512	1.80			70
[ALMA-ATA CAPETOWN	04	1310	1343	N16	E05	6285	1		1315	3.50	3.60		
	09	1134	1241	S08	W76	6282	1		1142	.80			
	09	1134	1241	S08	W76	6282	1		1252	1.20			
	09	1247	1320	S08	W76	6282	1		1519	2.00		5.60	
[HUANCAYO CAPETOWN	09	1503	1658	S07	W90	6282	2	2	1519	2.00			
	09	1503	1658	S07	W90	6282	2						
	10	0633	0715	S08	W90	6282	1		0639	.50			
	22	0739	0810	S00	E68	6301	1+	2	0803	3.65	9.26		65
[BAKOU MEUDON	22	1013	1100	S10	E60	6301	1						
	24	0010	0045	N13	W12	6299	1		0014	3.61		1.30	120
	26	0143	0151	S15	E14	6301	1		0145	2.58		1.28	100
	28	1823	1836	N20	W02	6303	1+	2	1829	4.00	5.50	2.50	
[MITAKA	29	0052	0107	N12	W02	6302	1	2	0057	1.47	1.53	3.49	183

COMMERCE - STANDARDS - BOUTNER

These flare reports are addenda to the December 1961 flares published in CRPL-F 209 Part B, January 1962.

ATHENS	ATHENS, GREECE	HONOLULU	HAWAII, USA	NERA	NEDERHORST den BERGH,
BAKOU	PIRCULI, USSR	IKOMASAN	KYOTO, JAPAN		NETHERLANDS
CAPETOWN	ROYAL OBSERVATORY,	KIEV KO	KIEV GAO, USSR	NIZMIR	KRASNAVA PAKHRA, USSR
	CAPE OF GOOD HOPE	KIEV KY	KIEV UNIVERSITY, USSR	SAC PEAK	SACRAMENTO PEAK, N.MEX. USA
CAPRI F	CAPRI, ITALY (GERMAN)	LOCKHEED	LOS ANGELES, CALIF., USA	SALTSJOBADEN	STOCKHOLM, SWEDEN
CAPRI S	CAPRI, ITALY (SWEDISH)	MCWATH	MCWATH-HULBERT	SCHAUBINS	SCHAUBINSLAND, GFR
CRINEE	SINEIZ, USSR		PONTIAC, MICH., USA	TASHKENT	TASHKENT, USSR
HERSTHONCEU	ROYAL GREENWICH OBSERVATORY,	MOSCOU	MOSCOW-GAISH, USSR	WENDEL	WENDELSTEIN, GFR
	HERSTHONCEUX, ENGLAND				

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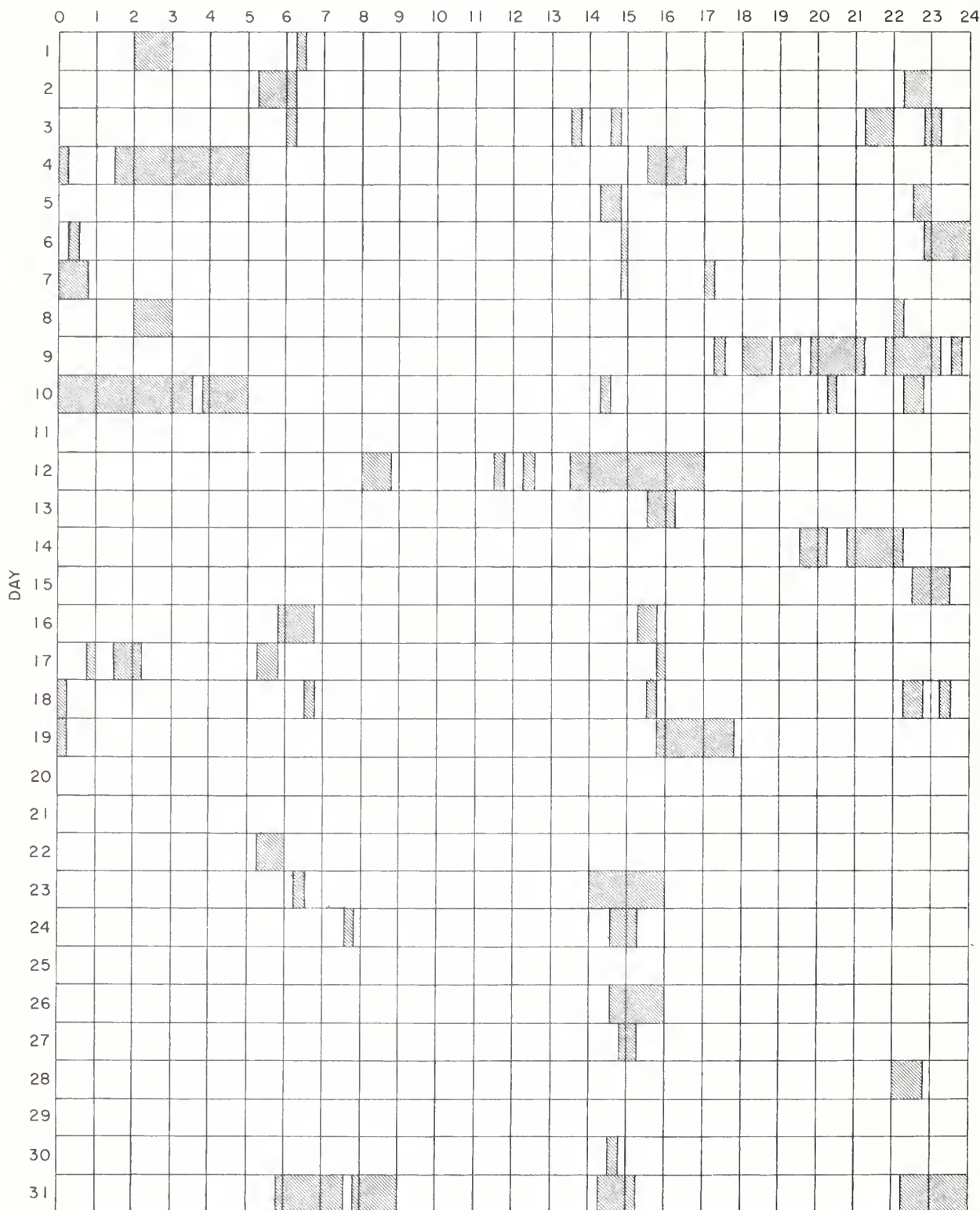
E = LESS THAN D = GREATER THAN U = APPROXIMATE □ = NOT REPORTED.

INTERVALS OF NO FLARE PATROL OBSERVATIONS

IIIk

DECEMBER 1961

HOUR-UT



COMMERCE - STANDARDS - BOULDER

Stations include:

Abastumani	Capetown	Honolulu	Kiev KO	Meudon	Nizmir	Uccle
Alma-Ata	Capri (Swedish)	Herstmonceux	Kodaikanal	Mitaka	Ondrejov	Voroshilov
Arcetri	Climax	Huancayo	Lockheed	Moscou	Sacramento Peak	Wendelstein
Bakou	Crimee	Ikomasan	McMath-Hulbert	Nizamia	Tachkent	

IONOSPHERIC EFFECTS OF SOLAR FLARES

IIII

SHORT WAVE RADIO FADEOUTS
SUDDEN COSMIC NOISE ABSORPTION
SUDDEN ENHANCEMENTS OF ATMOSPHERICS
SUDDEN PHASE ANOMALIES
SOLAR NOISE BURSTS AT 18 Mc

FEBRUARY 1962

FEBRUARY 1962	UNIVERSAL TIME			SWF TYPE	IMP	IMPORTANCE					WIDE SPREAD INDEX	STATIONS	KNOWN FLARE
	START	END	MAX			ABS	SCNA	SEA	SPA	BUR			
[01	0333	0421	0343				2			5	TY TA	0333E	
01	0336	0401		S 1+						5	OK CA TO		
[01	0553	0623	0600				1			1	TY	0550E	
-01	0554	0613		SL 1-						1	OK		
01	0650	0742	0654				1			1	TY	0647E	
[01	1634	1735U	1642				2			3	A5 A1 A9		
-01	1640			S 1						4	MC BE HU PR WS	1634	
[01	1656	1738	1704				1+			3	A9 A1	1655	
-01	1657	1720		S 1+						5	MC BE BO FM HU MC PR WS	1634	
* 01	1815	1850U	1830U				2			3	A5 A1	1818	
* [04	1526	1640	1546					34			BO	1508	
	04	1535	1615				1+			5	A5 A1 NE		
	04	1728	1810	1733					9			BO	1726
06	2211	2213							1	5	HA BO		
17	1940	2100						16			BO+		
19	1245	1355		SL 2						5	HU PR SW	1304E	
[20	0554	0613		S 1						4	OK CA	055C	
-20	0557	0630	0606				1			5	TY TA		
[21	2159	2201							1	5	HA BO	2158E	
-21	2206	2209							1	5	HA BO		
22	1410	1438		SL 1						4	HU PR	+	
* [23	1750	1950	1847			35	2			5	BO HA MC	1746	
	23	1810	1940						20		BO+		
	-23	1815	1950	SL 3-						5	MC BE BO FM HU PR WS		
	23	1816	2000					2			4		BO MC
24	0915	0940						2		3	JU KU	0918E	
24	1033	1103						2		1	KU	1029E	
24	1146	1211						2		1	KU		
27	2233	2300	2240					1		1	TY	2300	
27	2300	2318	2308					1		1	TY		
[28	0644	0716		S 2+						5	OK CA TO	0650E	
-28	0649	0754	0700					2		5	TY NE		

COMMERCE - STANDARD - BOULDER

+ = No known flare patrol

* = Sudden Enhancement of Signal 18 kc - NBA observed by A5.

JU = Juhlesruh, G.D.R.

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

MARCH 1962

ARO-OTTAWA

2800 MC

MARCH 1962	TYPE	START UT	DURATION HRS: MINS	MAXIMUM			REMARKS
				TIME UT MAX	PEAK FLUX	MEAN FLUX	
1	3 Simple 3	1255	55	1318	3	1.5	
1	3 Simple 3 A f	1529	6 31	Indet.	7	5	
	2 Simple 2 f	1530	1.2	1530.6	30	3	
	6 Complex f	1635	22	1642.5	425	81	
	4 Post Increase		28		8	4	
	1 Simple 1	1844	0.9	1844.3	1	0.5	
	1 Simple 1	1845.2	1	1845.5	3	1.5	
	1 Simple 1 f	1924.5	4.5	1926	3	1.5	
	1 Simple 1	1953	3	1955.2	2	1	
	1 Simple 1	2034.3	3.7	2035	3	1.5	
13	6 Complex f	1447.5	19.5	1450.5	470	85	
	4 Post Increase A		6 23		12	5	
	6 Complex f	1517.3	4.2	1520	3	1.5	
	1 Simple 1	1605	14	1608.5	6	3	
17	3 Simple 3 A	1939	1 41	2000	2	1	
	1 Simple 1	1939	3	1940.2	6	1.8	
18	3 Simple 3 A f	1340	4 00	1533	7	4.5	
	2 Simple 2 f	1450	21	1457	45	6	
18	- Record Incomplete A	1802	> 4 38	Indet.	10	-	Maximum flux reached during this period.
	1 Simple 1	1911.3	2.4	1912.1	3	1.5	
	1 Simple 1 f	2102.3	3.2	2104	3	1.5	
19	- Rise A	1338			13	-	Level rose and remained at a higher level than previously throughout balance of the observing period. Maximum flux reached during this period.
	2 Simple 2	2120	1	2120.7	20	10	
22	3 Simple 3 A	2132	26	2145	6	4.7	
	2 Simple 2	2136	7	2138	18	9	
22	- Record Incomplete	2214	> 36	2230	35	-	Maximum flux reached during this period
23	3 Simple 3 A	2110	35	2127	3	1.5	
	2 Simple 2 f	2117.5	6.5	2119.5	34	17	
24	1 Simple 1	1323	4	1324.5	2	1	
24	3 Simple 3	1353	16	1354	4	2	
25	3 Simple 3 A f	b1208	> 4 40	1425	16	-	
	2 Simple 2	b1208	> 4	1209.5	9		
	1 Simple	1223	4	1224	4	2	
	2 Simple 2	1234	12	1237	90	13	
	1 Simple 1 f	1357	5	1358.5	5	2.5	
25	3 Simple 3 f	1901	29	1907	3	1.5	
27	2 Simple 2 f	1448.3	4.7	1450	9	5	
30	1 Simple 1	2211.5	2	2212.5	2	1.3	

COMMERCE - STANDARDS - BOULDER

HOURS OF OBSERVATION: JANUARY, FEBRUARY, MARCH 1962

OBSERVING PERIOD:

January 13:30 UT - 21:30 UT (approx)

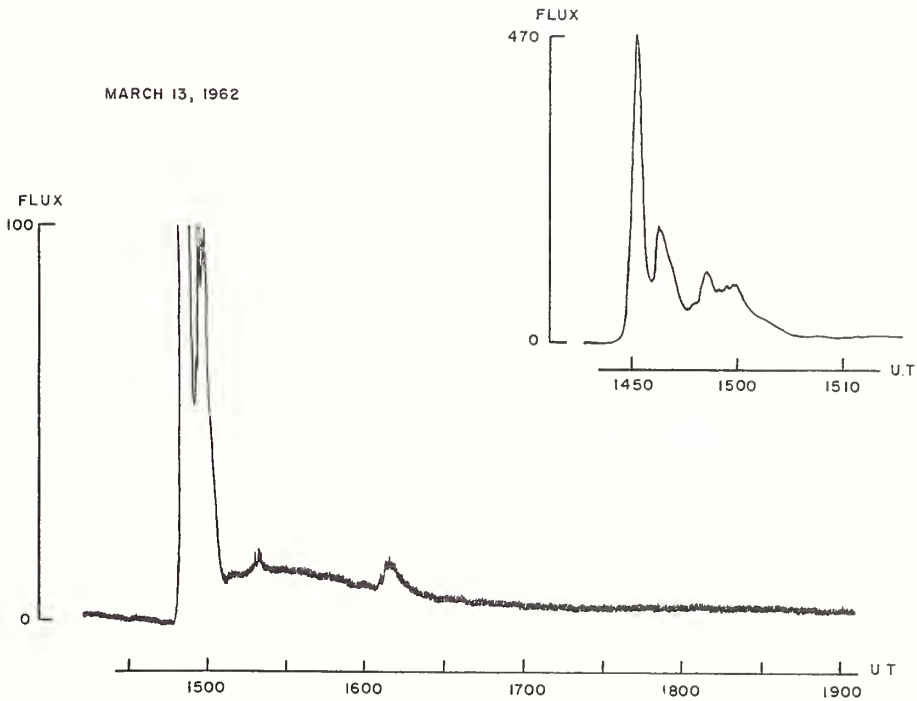
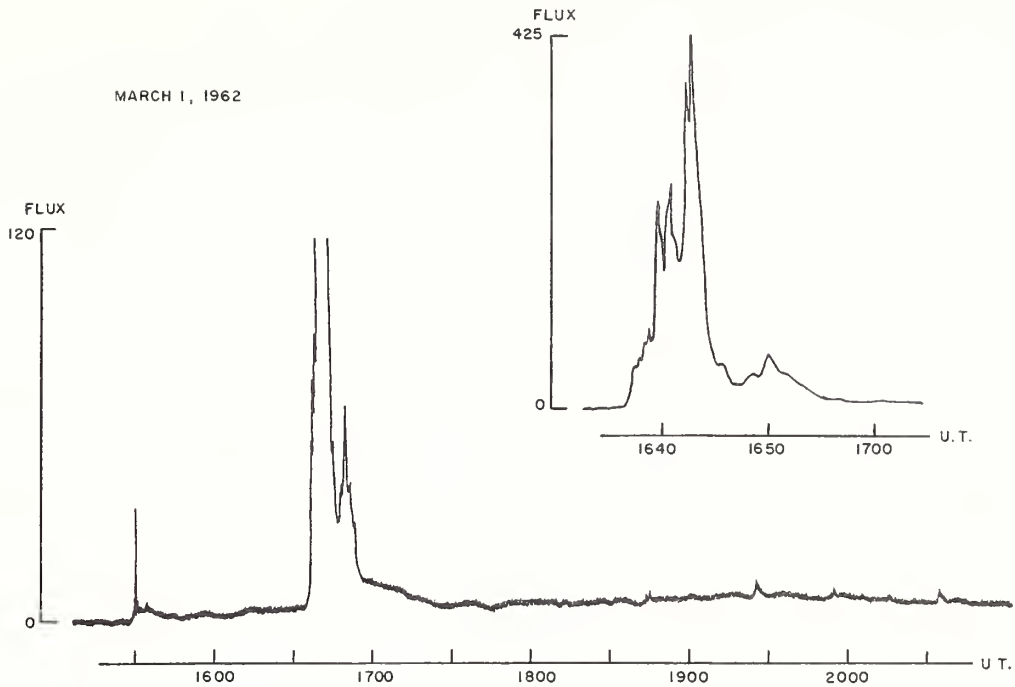
February 12:45 UT - 22:00 UT (approx)

March 12:10 UT - 22:40 UT (approx)

with the following exceptions:

February 6 - no observation 16:05 - 16:45
18:20 - 20:00
20:25 - Sunset

February 7 - no observation 13:30 - 15:10

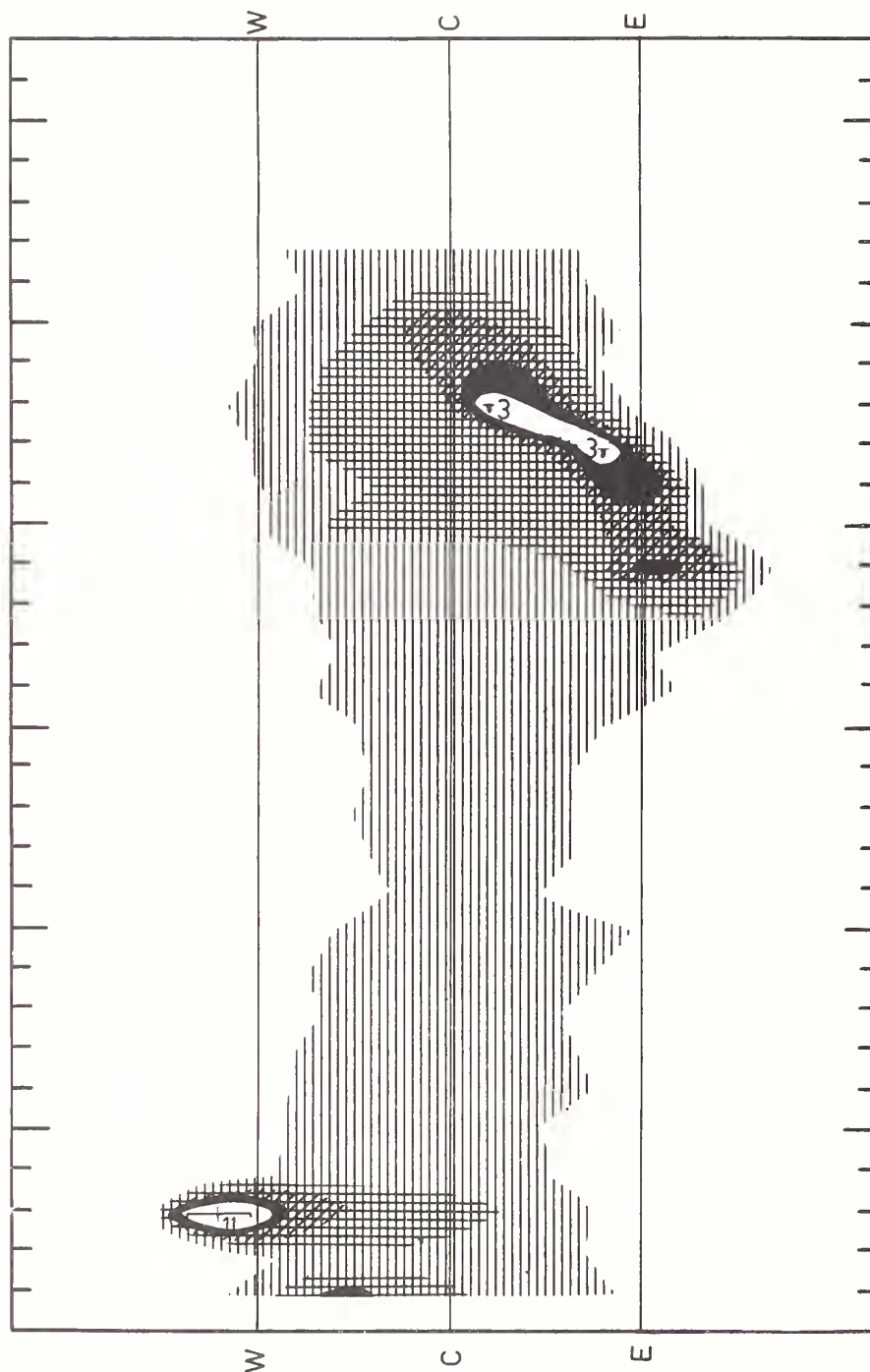


SOLAR RADIO EMISSION
INTERFEROMETRIC OBSERVATIONS

Nancay

MARCH 1962

169 Mc



SOLAR RADIO EMISSION
MARCH 1962

BOULDER 108 Mc.

Mar. 1962	Type	Start UT	Time of Maximum UT	Duration Minutes	Intensity
1	9a	1636.5	~1645	12.0	3
1	9b	1648.5	-	52	1
1	3	2033.5	2034.2	1.5	2
2	3	1353.5	1354.2	1.0	2
2	3	2342.2	2343.0	2.5	3
3	7	1514	1601	86	1
12	3	1336.0	1336.5	1.0	2
13	8	1450	1452.3	22	2
16	3	1936.8	1937.0	0.7	2
17	1	1558.0	1640.5	65	2
17	2	2302.1	2303.1	2.4	2
17	9a	2306.2	2307.5	5.0	3
17	9b	2315	2350	79.0	2
18	3	1419.9	1420.0	2	3
20	3	1408.1	1408.8	1.1	1
20	3	1707.9	1708.0	1.1	2
22	3	1426.5	1426.9	1.5	2
22	3	1559.6	1600.5	1.0	2
22	3	1605.0	1605.0	1.0	3
22	2	1738.1	1738.9	3.0	2
22	3	1957.3	1957.3	0.8	3
22	3	2300.7	2301.5	1.0	2
22	3	2302.4	2303.7	2.2	3
24	3	2134.5	2135.1	1.0	2
25	3	1906.1	1906.2	1.8	2
26	2	1423.6	1425.9	5.8	2

COMMERCE - STANDARDS - BOULDER

NOMINAL TIMES OF OBSERVATION
MARCH 1962

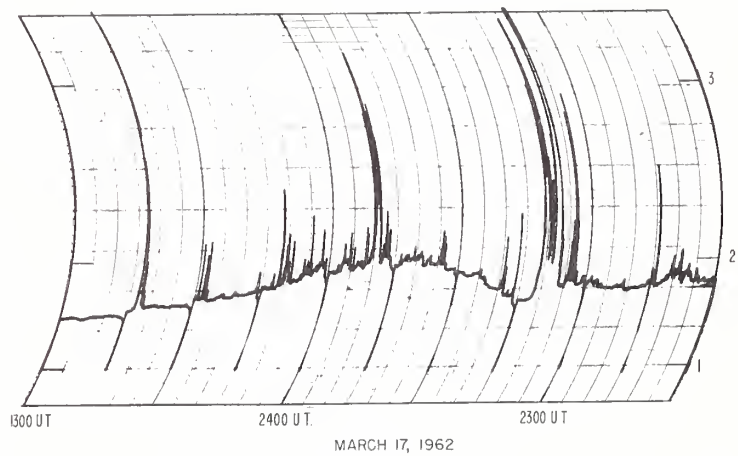
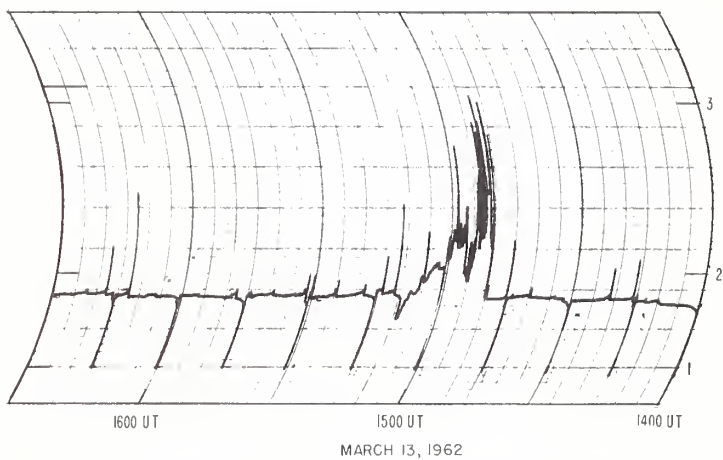
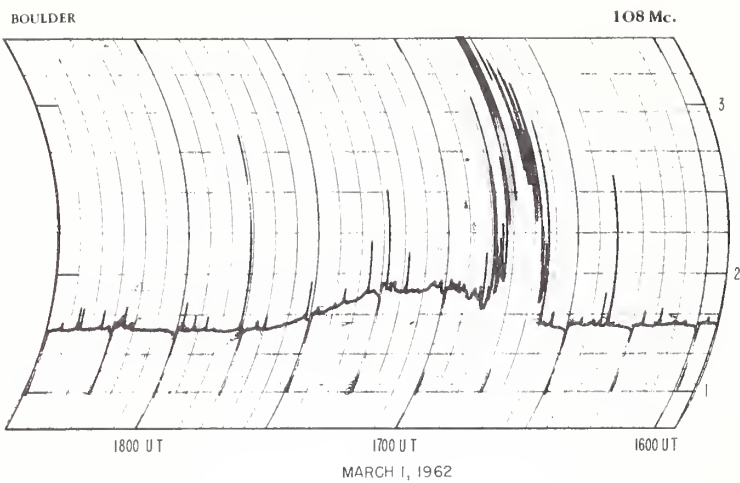
BOULDER 108 Mc.

Mar. 1962	U.T.	Mar. 1962	U.T.
1	1339-0016	16	1316-0032
2	1337-0017	17	1314-0033
3	1336-0018	18	1312-0034
4	1334-0019	19	1311-0035
5	1333-0020	20	1309-0036
6	1331-0021	21	1307-0037
7	1330-0022	22	1306-0038
8	1328-0023	23	1304-0039 I 1955-2200
9	1327-1600; 1650-0024	24	1303-0040
10	1320-0025 I 1320-0025	25	1301-0041
11	1645-0026	26	1259-0042
12	1322-0028	27	1258-0043
13	1320-0029	28	1256-0044
14	1319-0030	29	1254-0045
15	1317-0031	30	1253-0046
		31	1251-0047

COMMERCE - STANDARDS - BOULDER

SOLAR NOISE BURSTS

MARCH 1962



SOLAR RADIO EMISSION SPECTRUM OBSERVATIONS

IVf

MARCH 1962

HAO BOULDER

7.6-41 MC

Date	Bursts			Frequency Range (mc)	Date	Bursts			Frequency Range (mc)
1962	Type	Time (U.T.)	Inten- sity		1962	Type	Time (U.T.)	Inten- sity	
1 Mar	III	1534.30-1534.45	1-	21 - 41	15 Mar	III	1804.15-1804.45	1-	23 - 41
	III	1547-1548.15	1+	21 - 41		III	1956.30-1957.15	1+	23 - 41
	III	1607.30-1608	1	24 - 35		III	2146.30-2146.45	1-	24 - 39
	III	1621.30-1622.15	1+	22 - 41		III	2221.30-2222	1	26 - 36
	III	1625-1626.30	2	16.5-41		III	2233.45-2234.30	1-	24 - 40
	III	1634.30-1635	1	24 - 41	16	III	2307.15-2307.30	1	25 - 41
	II	1637.15-1641.30-1705	3+	12 - 41		continuum	1921.15-1930.45	1+	11 - 41
	IV	1700-2005	2	22 - 41		III	1924.45-1926.30	2	12 - 41
	III	1707.15-1709.15	1+	15.5-41		III	2255-2256	1-	25 - 41
	III	1916.45-1917.45	1+	22 - 41		III	2309-2309.15	1	29 - 41
	III	1953.30-1954.15	1	18.5-41	17 ^c	III	2410.30-2410.45	1-	31 - 41
	continuum	2000-2355	1-	24 - 41		III	1422.15-1422.30	1-	25 - 37
	III	2028.30-2029.15	1-	24 - 41		III	1423.30-1424	1	22 - 41
	III	2035.30-2036	1-	23 - 34		III	1533.15-1534.15	1+	23 - 41
	III	2108-2108.45	1	19 - 41		III	1558.15-1559.15	1-	26 - 41
	III	2157.30-2159	1-	22 - 41		III	1608.30-1609	1	29 - 41
	III	2207.30-2208	1	25 - 34		III	1609.30-1609.45	1-	29 - 41
	III	2340-2340.15	1	22 - 41		III	1610-1610.15	1	27 - 41
	III	2350.30-2352	1-	25 - 41		III	1624.30-1625	1-	22 - 41
	2	continuum	1354-1500	1-		27 - 41	III	1638-1642.30	1
III		1354-1354.45	1-	24 - 41	III	1643.45-1644.15	1	32 - 41	
III		1356-1356.30	1-	24 - 41	III	1645.15-1645.45	1-	26 - 37	
III		1402.30-1403	1	21 - 39	III	1653.30-1654.15	1	21 - 37	
III		1407-1408	1-	23 - 41	III	1721.15-1721.45	1-	24 - 41	
III		1505.30-1506	1-	25 - 41	III	1725-1725.30	1-	25 - 41	
III		1849.30-1850.30	1	19 - 41	III	1837.15-1839	1+	12 - 41	
III		2000.15-2000.45	1-	29 - 41	III	1931.30-1932	1-	27 - 34	
III		2337.30-2338	1-	25 - 41	III	2001.30-2002.15	1-	23 - 37	
III		2342.15-2345	1+	22 - 41	III	2002.30-2003	1	23 - 41	
III		2345.30-2345.45	1	23 - 41	III	2003.30-2004.15	1-	24 - 38	
III		2346-2346.15	1-	24 - 41	continuum	2100-2400	1-	23 - 41	
III		2356.30-2357.15	1-	23 - 40	III	2142.30-2143	1	26 - 41	
III		1551.30-1551.45	1	29 - 38	III	2146.45-2146.45	1	24 - 41	
continuum		1850-1925	1-	24 - 41	III	2207-2208.45	1	19 - 36	
III		1955.15-1956.30	1	22 - 41	III	2224.30-2225	1+	21 - 41	
III		1958-1959.30	1+	11 - 41	III	2306.30-2306.45	1+	22 - 37	
III		2055.30-2056	1	21 - 38	III	2307-2311	2	14.5-41	
III		1608.15-1608.45	1-	29 - 41	III	2429.30-2430	1-	25 - 40	
III		1645.45-1646.15	1	21 - 41	III	2442.30-2443	1+	23 - 41	
4	III	1804.45-1805	1-	25 - 35	III	1420.15-1421.30	1+	21 - 41	
	III	1945-1946.45	1+	21 - 41	continuum	1524-1700	1-	22 - 41	
	III	2152.15-2153	1	19 - 41	continuum	2125-2440	1-	25 - 41	
	III	2312.30-2312.45	1-	22 - 41	continuum	1524-2400	1-	24 - 41	
	III	1532.45-1533.15	1-	23 - 38	III	1650.30-1651.15	1+	7.6 - 41	
5	III	1622.15-1622.30	1+	27 - 41	III	1955.45-1956.30	1+	25 - 41	
	III	1627.45-1628.15	1-	18 - 34	continuum	1528-2450	1-	24 - 41	
	III	1828-1828.15	1-	28 - 41	III	1838.15-1838.45	1+	24 - 41	
	continuum	1935-2115	1-	19 - 41	III	2033-2034.15	1+	12 - 41	
	III	2044.30-2044.45	1-	29 - 41	III	2338.30-2339	1+	23 - 41	
6	III	2103.45-2104.15	1-	22 - 35	III	2358-2359	1+	24 - 41	
	continuum	2359-2410	1-	24 - 41	continuum	1535-2435	1-	26 - 41	
	III	1514.30-1518.30	1-	21 - 41	III	1810.45-1812.15	1+	13 - 41	
	continuum	1519-1550	1-	22 - 41	III	1850.45-1851.45	1+	13 - 41	
	III	1631.15-1631.45	1	21 - 41	III	2123.15-2123.30	1+	24 - 41	
8	III	1737.15-1737.45	1-	23 - 41	III	2300-2300.15	1+	24 - 41	
	III	1832.45-1833	1	23 - 41	continuum	1426.30-1427.15	1+	21 - 41	
	III	1335-1335.30	1-	25 - 41	III	1432.30-1433	1	26 - 41	
	III	1530-1530.15	1-	30 - 41	III	1452-1452.15	1	27 - 41	
	III	1537.15-1537.45	1-	24 - 41	continuum	1505-2445	1-	24 - 41	
10	III	1737.15-1737.45	1-	23 - 41	III	1509.15-1510	1+	27 - 41	
	III	1832.45-1833	1	23 - 41	22 ^{XA}	III	1426.30-1427.15	1+	21 - 41
	III	1335-1335.30	1-	25 - 41		III	1432.30-1433	1	26 - 41
	III	1530-1530.15	1-	30 - 41		III	1452-1452.15	1	27 - 41
	III	1537.15-1537.45	1-	24 - 41		continuum	1505-2445	1-	24 - 41
11	III	1622.15-1622.30	1+	27 - 41		III	1509.15-1510	1+	27 - 41
	III	1627.45-1628.15	1-	18 - 34	III	1426.30-1427.15	1+	21 - 41	
	III	1828-1828.15	1-	28 - 41	III	1432.30-1433	1	26 - 41	
	continuum	1935-2115	1-	19 - 41	III	1452-1452.15	1	27 - 41	
	III	2044.30-2044.45	1-	29 - 41	continuum	1505-2445	1-	24 - 41	
12	III	2103.45-2104.15	1-	22 - 35	III	1509.15-1510	1+	27 - 41	
	continuum	2359-2410	1-	24 - 41	III	1426.30-1427.15	1+	21 - 41	
	III	1514.30-1518.30	1-	21 - 41	III	1432.30-1433	1	26 - 41	
	continuum	1519-1550	1-	22 - 41	III	1452-1452.15	1	27 - 41	
	III	1631.15-1631.45	1	21 - 41	continuum	1505-2445	1-	24 - 41	
13	III	1737.15-1737.45	1-	23 - 41	III	1509.15-1510	1+	27 - 41	
	III	1832.45-1833	1	23 - 41	III	1426.30-1427.15	1+	21 - 41	
	III	1335-1335.30	1-	25 - 41	III	1432.30-1433	1	26 - 41	
	III	1530-1530.15	1-	30 - 41	III	1452-1452.15	1	27 - 41	
	III	1537.15-1537.45	1-	24 - 41	continuum	1505-2445	1-	24 - 41	
15	III	1737.15-1737.45	1-	23 - 41	III	1509.15-1510	1+	27 - 41	
	III	1832.45-1833	1	23 - 41	III	1426.30-1427.15	1+	21 - 41	
	III	1335-1335.30	1-	25 - 41	III	1432.30-1433	1	26 - 41	
	III	1530-1530.15	1-	30 - 41	III	1452-1452.15	1	27 - 41	
	III	1537.15-1537.45	1-	24 - 41	continuum	1505-2445	1-	24 - 41	

c = many faint type III's not reported

XA = no observations 2210-2253

COMMENCE - STANDARDS - BOULDER

SOLAR RADIO EMISSION SPECTRUM OBSERVATIONS

MARCH 1962

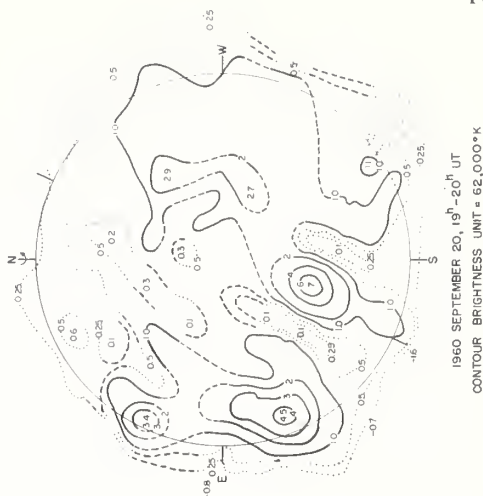
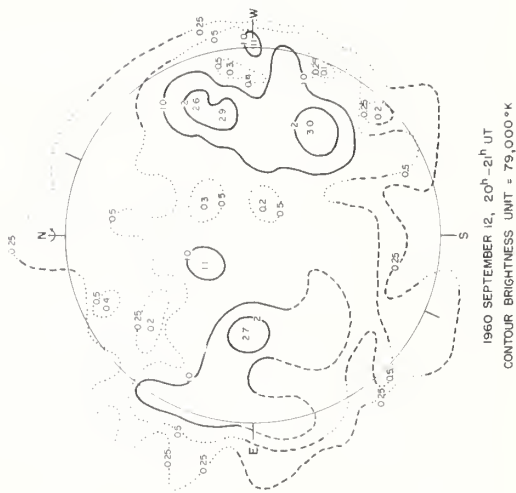
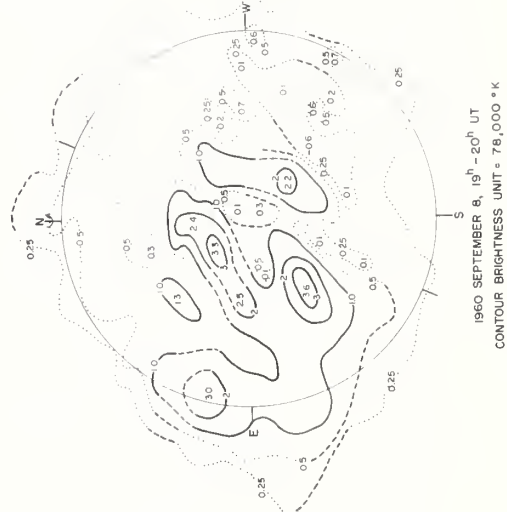
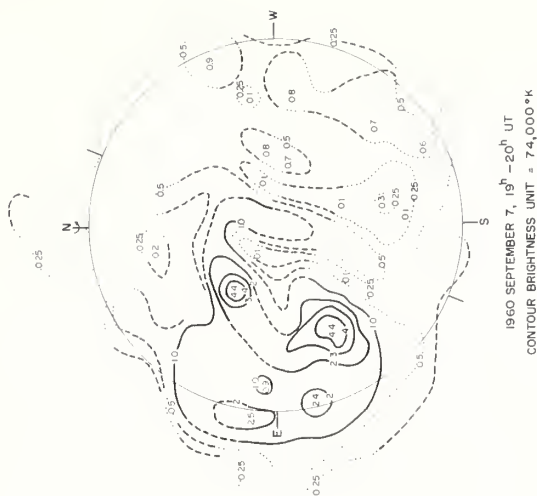
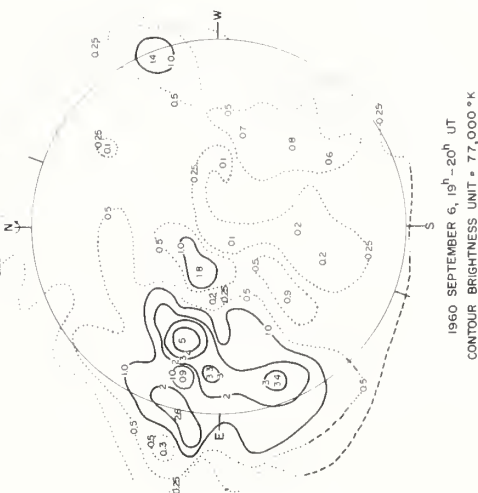
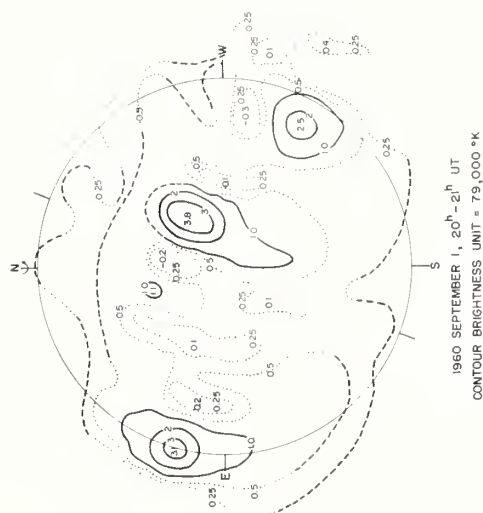
HAO BOULDER

7.6-41 Mc

Date	Bursts			Frequency Range (mc)	Date	Bursts			Frequency Range (mc)
1962	Type	Time (U.T.)	Intensity		1962	Type	Time (U.T.)	Intensity	
22 Mar	III	16h3.30-16h4.15	1+	25 - h1	24 Mar	III	215h-215h.30	1	21 - h1
	III	1732-1732.30	1	12 - h1		III	2158.15-2159	2	21 - h1
	III	1735-1738	1	12 - h1		III	2159-2200	1+	16.5-h1
	III	1738.15-1739.45	1	12 - h1		III	2513.45-2514	1	26 - h1
	III	17h0-17h2.15	1	12 - h1	25	III	1611.45-1612	1+	24 - h1
23	continuum	2351.15-2355	1+	22 - h1		III	1617.45-1618	1	24 - h1
		1523-15h7.30	1	22 - h1		III	1902.30-190h.30	2	8.5- h1
	III	1551-1551.30	1-	24 - 38		III	1905.15-1909.45	2+	7.6- h1
	III	1559.30-1559.45	1-	25 - 38	26	III	1415.15-1415.30	1	25 - h1
	III	1704-1704.30	1-	24 - 38		III	142h.30-1425.15	1	26 - h1
	III	1737.45-1738.15	1-	24 - h1		III	1615.15-1615.45	1	31 - h1
	III	17h1.30-17h2	1	24 - h1		III	1615.45-1616.15	1-	31 - h1
	III	1801.15-1801.30	1-	25 - h1	29	III	1606.30-1607	1	22 - h1
	III	1916.30-1917	1	23 - 39	30	III	1342-1342.30	1	23 - h1
	III	19h2-19h2.15	1	25 - h1		III	1507.45-1508.30	1-	21 - h1
	III	19h7.45-19h8	1	26 - 32		III	1508.30-1509.30	1+	16.5-h1
	III	2113.30-2114	1	20 - h1		III	1537.30-1540	1	21 - 38
	III	2119-2119.30	1	24 - h1		III	1605.30-1606.15	1	16.5-h1
	III	21h3.45-21h4.15	1-	27 - h1		III	1707.30-1708	1	22 - h1
	III	21h9.15-21h9.45	1	22 - h1		III	1714.15-1714.45	1-	24 - 34
	III	2150.45-2151.15	1-	22 - h1		III	1758-1759.15	1	24 - h1
	III	2208-2208.30	1	20 - h1		III	1825.15-1826	1+	22 - h1
	III	2218.45-2219.15	1-	21 - 38		III	1833.45-1835	2	7.6- h1
	III	2227-2227.30	1+	21 - h1		III	1936.30-1937.15	2	11 - h1
	III	2230-2230.15	1-	25 - h1		III	1937.15-1938.30	2	11 - h1
	III	2259.15-2259.30	1-	33 - h1		III	1939.30-1940.15	1	12 - h1
	III	2309-2309.30	1	30 - h1		III	1940.15-1941	1+	12 - h1
24 ^c	III	15h1.45-15h2	1-	24 - h1		III	2051.45-2053.15	2	13 - h1
	III	1550.30-1550.45	1+	23 - h1		III	2130.30-2131.30	2	13 - h1
	III	1555.30-1555.45	1-	25 - h1		III	2134.15-2135	1+	13 - h1
	III	1603.15-1603.45	1	20 - h1		III	2247.15-2248	1+	22 - h1
	III	1612-1612.30	1	20 - h1		III	2248.15-2249	1+	22 - h1
	III	1615.15-1616	1+	23 - h1		III	2249-2249.30	2	21 - h1
	III	1638.45-1639	1-	25 - h1		III	2250.30-2251.15	1-	24 - h1
	III	1639.30-1640	1	25 - h1		III	2251.30-2252	1	24 - h1
	III	1653.30-1654.30	1+	26 - h1		III	2341.30-2342.15	1	28 - h1
	III	1832.15-1832.45	1+	24 - h1		III	2458.15-2458.45	1-	25 - 33
	III	1837.15-1837.45	1	22 - h1		III	2459-2459.30	1	25 - 33
	III	1937.30-1938	1	21 - h1		III	2500-2500.15	1	25 - 32
	III	1939-1939.30	1	22 - h1	31	III	1639.30-1639.45	1-	22 - 37
	III	2016.45-2017	1	25 - h1		III	1647.30-1650.45	2	12 - h1
	III	2023.30-2024	1	27 - h1		III	2045.15-2046.30	1+	14.5-h1
	III	2034.15-2034.45	1	24 - h1		III	2046.30-2046.45	1	24 - h1
	III	2057.45-2058	1	21 - h1		III	2047-2048.30	1+	23 - h1
	III	2113.45-2114.15	1	21 - 38		III	2324.30-2325	1	24 - h1
	III	2133-2134	2	21 - h1		III	2440.45-2442	2	23 - h1
						III	2444.30-2446	2	24 - h1

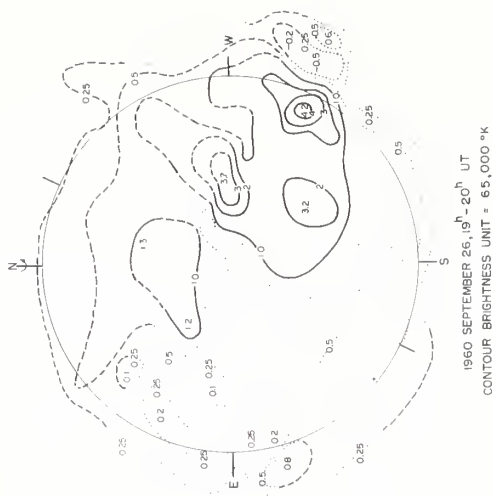
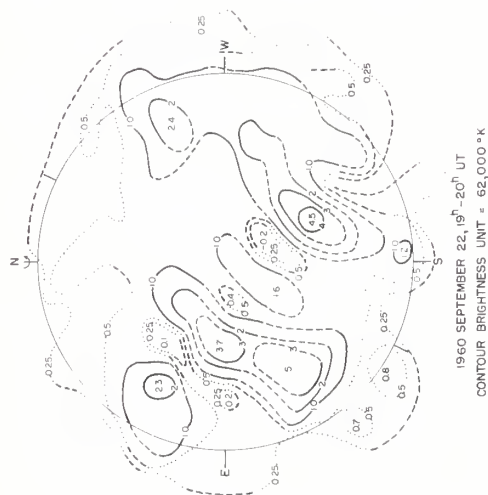
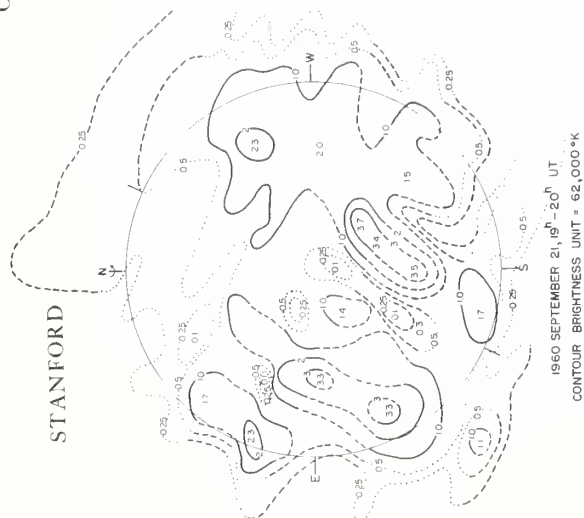
^c = many faint type III's not reported

COMMERCE - STANDARDS - BOULDER



OLAR RADIO EMISSION SPECTROHELIOGRAMS
SEPTEMBER 1960

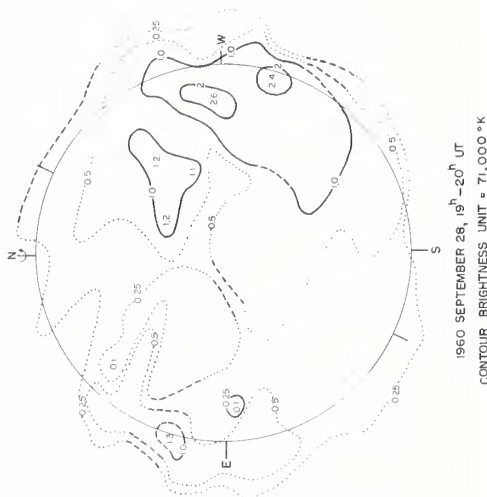
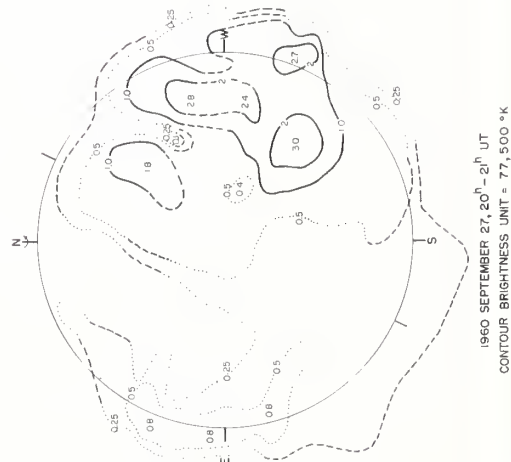
9.1 cm



Footnote:

Pencil-beam observations were made during this period on only a few days, but E-W fan-beam observations are available for many other days.

In some of the pencil-beam maps for the period September to November 1960, there occurred a small spurious response lying to the south of an active region. This was caused by a maladjustment in the phasing of the N-S array and was corrected in the month of January 1961.



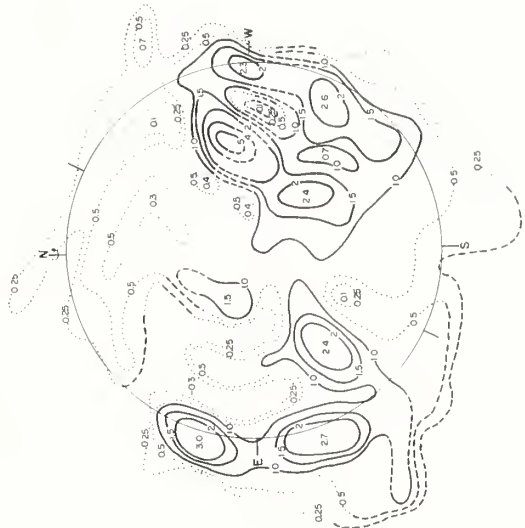
STANDARDIZATION OF THE DATA

OCTOBER-NOVEMBER 1960

9.1 cm



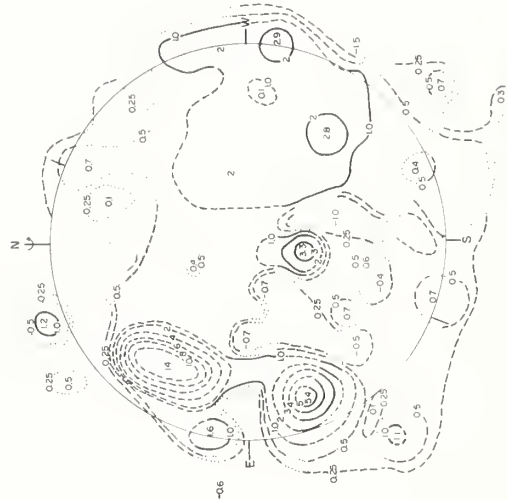
1960 OCTOBER 12, 19^h - 20^h UT
CONTOUR BRIGHTNESS UNIT = 50,000 °K



1960 OCTOBER 13, 19^h - 20^h UT
CONTOUR BRIGHTNESS UNIT = 56,000 °K



1960 OCTOBER 14, 19^h-20^h UT
CONTOUR BRIGHTNESS UNIT = 52,000 °K



1960 NOVEMBER 8, 20^h - 21^h UT
CONTOUR BRIGHTNESS UNIT = 59,000 °K



1960 NOVEMBER 9, 19^h - 20^h UT
CONTOUR BRIGHTNESS UNIT = 62,000 °K



1960 NOVEMBER 11, 19^h - 20^h UT
CONTOUR BRIGHTNESS UNIT = 63,000 °K

COSMIC RAY INDICES

Climax Neutron Monitor

IGC STATION B 305

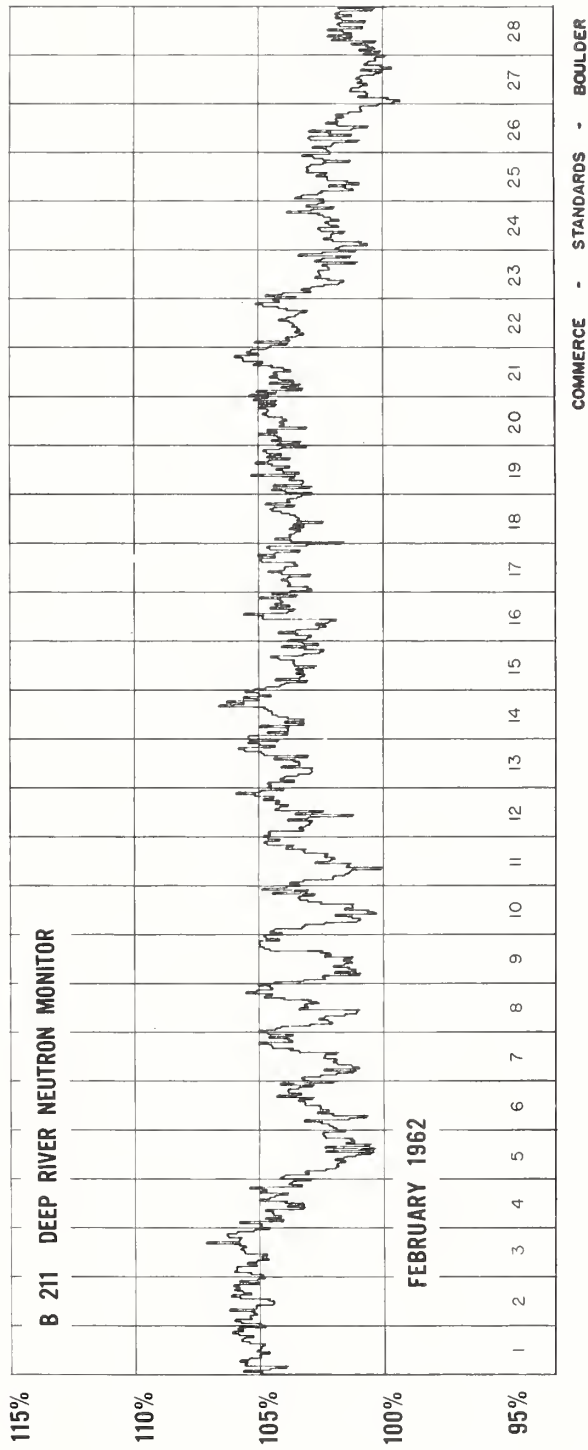
FEBRUARY 1962

Feb. 1962	Daily average counts/hr.*	Feb. 1962	Daily average counts/hr.*
1	3103.7	15	3072.0
2	3102.1	16	3076.0
3	3112.6	17	3095.6
4	3109.4	18	3087.4
5	3017.1	19	3086.1
6	3019.7	20	3099.9
7	3029.4	21	3115.2
8	3035.9	22	3091.9
9	3031.5	23	3064.4
10	3010.9	24	3055.7
11	3029.1	25	3058.2
12	3081.7	26	3029.3
13	3080.6	27	3024.5
14	3079.2	28	3012.5

COMMERCE - STANDARDS - BOULDER

*Scaling Factor 128

COSMIC RAY INDICES (Pressure Corrected Hourly Totals)

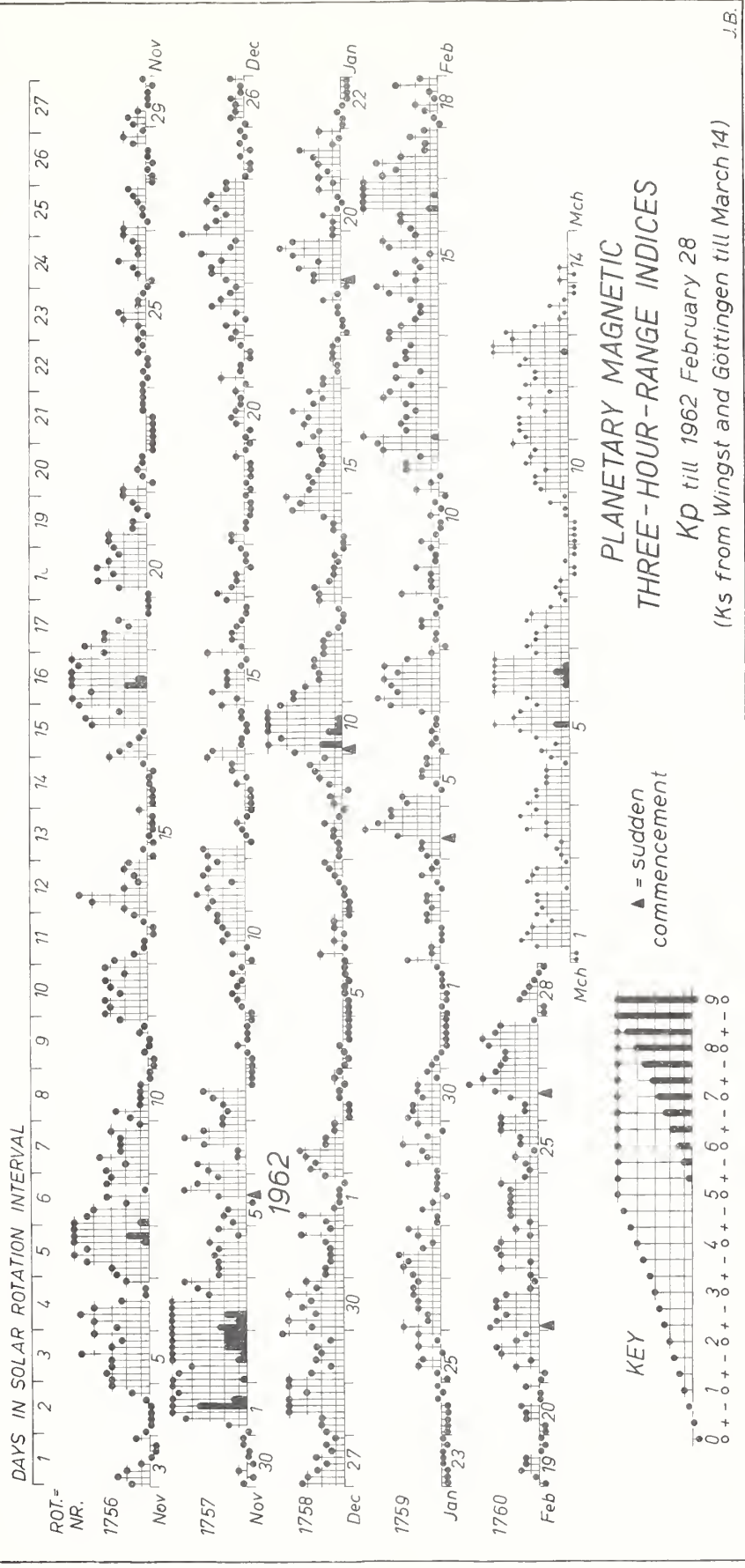


GEOMAGNETIC ACTIVITY INDICES

FEBRUARY 1962

Feb. 1962	C	Values Kp								Sum	Ap	Final Selected Days
		Three hour Gr. interval										
		1	2	3	4	5	6	7	8			
1	0.0	0o	0+	0o	0o	0+	0+	0+	1-	2o	1	Five Quiet
2	0.1	3-	1o	1o	0+	0+	0+	1+	1+	8+	4	
3	0.1	1o	1+	1+	0+	1-	2-	1o	1-	8o	4	
4	1.4	1+	2-	2-	3+	5o	4+	4-	4-	25-	20	
5	0.4	3-	3o	0+	1-	2-	2-	1+	1+	13-	7	
6	0.4	0+	1o	1-	1o	1-	1-	2-	4-	10-	6	10
7	1.1	4+	3+	4-	4o	3+	4o	3-	1o	26+	20	19
8	0.1	0o	1-	1-	2-	2-	1-	0+	1-	6+	3	28
9	0.1	3o	1o	1o	1o	2o	1-	1-	1o	10+	6	
10	0.0	2-	1-	0+	0+	1o	0+	1-	0o	5o	3	
11	0.9	2o	1o	0+	3-	3-	2-	4o	4+	19-	13	Five Disturbed
12	1.0	5+	3-	3o	3-	2o	3-	4o	4-	26o	20	
13	0.9	2+	3+	2-	3+	3-	3-	2+	4-	22o	13	
14	0.9	4-	3o	2o	2-	2-	2+	4-	4+	22+	15	
15	0.9	2o	3+	2-	2o	1o	4-	4o	2o	20-	12	
16	1.5	2+	3o	3o	6-	5o	5+	5o	5o	34+	28	12
17	0.8	4o	3+	4+	3o	1+	1+	2+	1+	21o	14	16
18	0.4	0+	1-	1+	2o	1-	1o	3+	2-	11o	6	26
19	0.0	0o	1-	2-	1+	1+	0+	0o	0+	6-	3	
20	0.0	0o	0o	1+	1+	2-	0+	0+	1+	6+	3	
21	0.4	0+	0o	2o	1o	3o	3+	2o	1+	13o	7	Ten Quiet
22	0.8	4-	3+	3-	3+	3+	3-	1o	1-	21-	13	
23	0.6	1o	3o	1o	3o	3+	3o	1o	2o	17+	10	
24	0.6	1o	2+	2+	2+	2+	2+	3o	1+	17o	9	
25	0.5	1o	1+	2o	1-	2-	2-	3o	3o	14+	8	
26	1.2	3o	1+	1+	2+	3+	5-	4o	3+	23+	17	3
27	1.0	3o	3-	3-	4-	4o	3+	3o	1-	23o	17	6
28	0.0	0o	0o	2-	1+	1o	1-	0+	0o	5o	2	8
												9
												10
												19
												20
												28
Mean:	0.58									Mean:	10	

COMMERCE - STANDARDS - BOULDER



CRPL RADIO PROPAGATION QUALITY FIGURES AND FORECASTS FEBRUARY 1962

NORTH ATLANTIC

NORTH PACIFIC

DATE FEBRUARY 1962	NORTH ATLANTIC 6-HOURLY QUALITY FIGURES				SHORT-TERM FORECASTS ISSUED ABOUT ONE HOUR IN ADVANCE OF:				WHOLE DAY INDEX	ADVANCE FORECAST* (J-REPORTS) FOR WHOLE DAY, ISSUED IN ADVANCE BY:				GEOMAGNETIC K _{eff}		NORTH PACIFIC 12-HOURLY QUALITY FIGURES	SHORT-TERM FORECASTS ISSUED AT		WHOLE DAY INDEX	ADVANCE FORECASTS (J-REPORTS) FOR WHOLE DAY, ISSUED IN ADVANCE BY:				GEOMAGNETIC K _{eff}			
	00 06 12 18 TO TO TO TO				00 06 12 18					1-7 1-7 1-3 1-7 DAYS DAYS DAYS DAYS				HALF DAY (1) (2)			0700 1900 TO TO			0500 1800 ISSUED AT		1-7 1-7 1-3 1-7 DAYS DAYS DAYS DAYS				HALF DAY (1) (2)	
	06 12 18 24									FINAL J ₅ SOW J										FINAL J ₅ SOW J _p							
01	50	4+	6+	60	5	5	6	6	5+	6	6	6	6	0	0	6	6	6	6	6	6	6	0	0			
02	60	6-	6+	60	5	4	6	6	60	6	6	6	6	1	1	7	5	6	6	7	6	6	1	0			
03	50	5+	7-	60	5	4	6	6	60	6	6	6	6	1	1	6	6	5	6	6	6	0	0				
04	6-	50	70	60	5	5	6	5	60	6	6	6	6	2	(4)	6	4	5	5	(4)	6	6	1	(4)			
05	5-	5-	7-	60	5	5	7	6	6-	6	6	6	6	2	2	4	5	5	6	6	6	1	1				
06	5-	3+	6+	6+	5	5	6	6	5-	5	5	5	5	1	2	6	6	5	6	6	5	0	1				
07	6-	4-	60	6-	5	5	5	6	50	5	5	5	5	(4)	2	7	5	5	6	6	5	3	2				
08	5-	4+	7-	60	5	4	6	6	5+	5	5	5	5	1	1	6	5	6	6	6	5	0	0				
09	5+	5-	7-	6-	5	5	6	6	6-	5	5	5	5	2	1	7	6	5	6	7	6	1	1				
10	6-	5-	6+	6+	5	4	6	6	6-	6	6	6	6	1	0	5	7	6	6	6	6	0	0				
11	5+	5-	6+	6-	6	5	7	6	6-	6	6	6	6	2	3	6	5	7	6	6	6	1	2				
12	50	4-	6+	60	5	4	6	5	50	6	6	6	6	3	3	6	6	5	6	6	6	3	2				
13	4+	40	6+	6+	5	4	6	6	5-	6	6	6	6	3	2	6	6	6	6	6	6	2	2				
14	4+	4-	7-	6-	4	4	6	6	5-	5	5	5	5	2	3	5	7	6	6	6	6	2	2				
15																											
16	4+	40	5+	40	4	4	5	5	(4+)	5	5	5	5	3	(4)	4	4	6	4	5	6	(4)	(5)				
17	3+	30	6+	6-	4	3	6	5	(40)	5	5	5	5	3	1	6	5	4	6	6	6	3	1				
18	4+	3+	7-	60	4	4	6	6	50	6	6	6	6	1	2	6	6	6	7	6	6	1	1				
19	5+	40	7-	6+	5	4	7	6	5+	6	6	6	6	1	0	7	6	6	6	7	6	1	0				
20	5+	4-	70	7-	5	4	6	6	6-	6	6	6	6	1	1	6	7	6	6	6	6	1	1				
21	6+	50	70	7-	5	4	7	6	6+	6	6	6	6	1	2	6	6	6	6	6	6	1	2				
22	6-	5+	7-	6-	5	4	7	5	60	5	5	5	5	3	2	6	6	6	6	6	2	2					
23	6-	6-	7-	7-	5	5	7	6	6+	5	5	5	5	2	2	6	6	6	6	6	6	2	2				
24	6+	5+	70	6+	6	6	7	7	6+	6	6	6	6	2	3	7	7	6	6	6	6	0	2				
25	60	6-	7-	6+	6	5	7	7	6+	6	6	6	6	1	3	6	7	6	6	7	6	0	2				
26	6+	6-	7-	6+	6	6	7	6	6+	6	6	6	6	2	3	6	5	6	7	6	6	0	3				
27	60	5-	60	6-	6	5	6	6	6-	6	6	6	6	3	3	6	6	6	6	6	6	3	3				
28	4+	40	7-	6+	5	4	6	6	50	6	6	6	6	1	1	6	6	6	6	6	6	1	0				
Score: Quiet Periods	P	13	6	18	18	15	15			15	15																
	S	8	7	10	9	11	11			11	11																
	U	0	0	0	0	0	0			0	0																
	F	0	1	0	0	0	0			0	0																
Disturbed Periods	P	3	10	0	0	0	0			0	0																
	S	4	3	0	1	2	2			2	2																
	U	0	1	0	0	0	0			0	0																
	F	0	0	0	0	0	0			0	0																

() Represent disturbed values
All times are Universal Time (U.T.)

CRPL RADIO PROPAGATION QUALITY FIGURES AND FORECASTS NORTH ATLANTIC

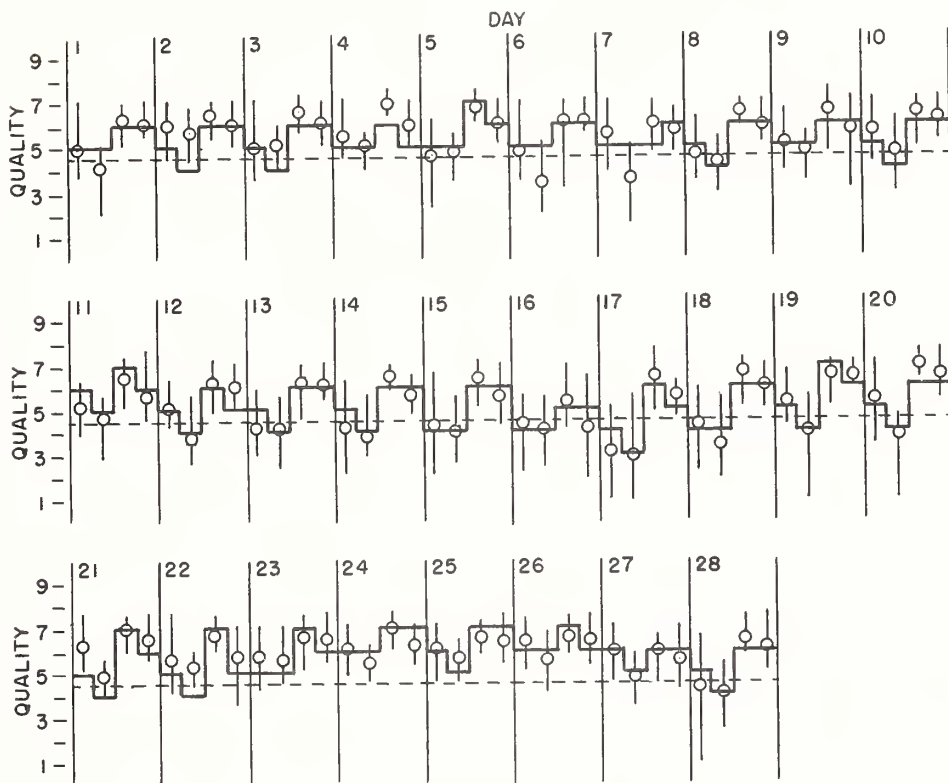
VIIb

FEBRUARY 1962

— Short-term forecast

o Quality figure

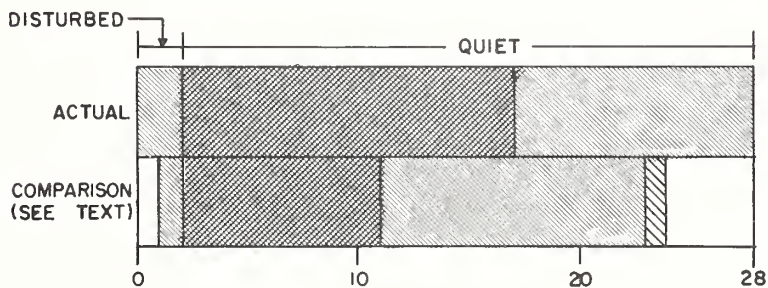
| Range of reports



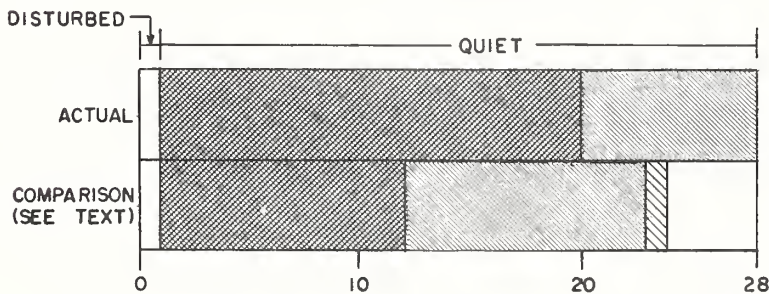
OUTCOME OF ADVANCED FORECASTS

FINAL ESTIMATE

NORTH ATLANTIC

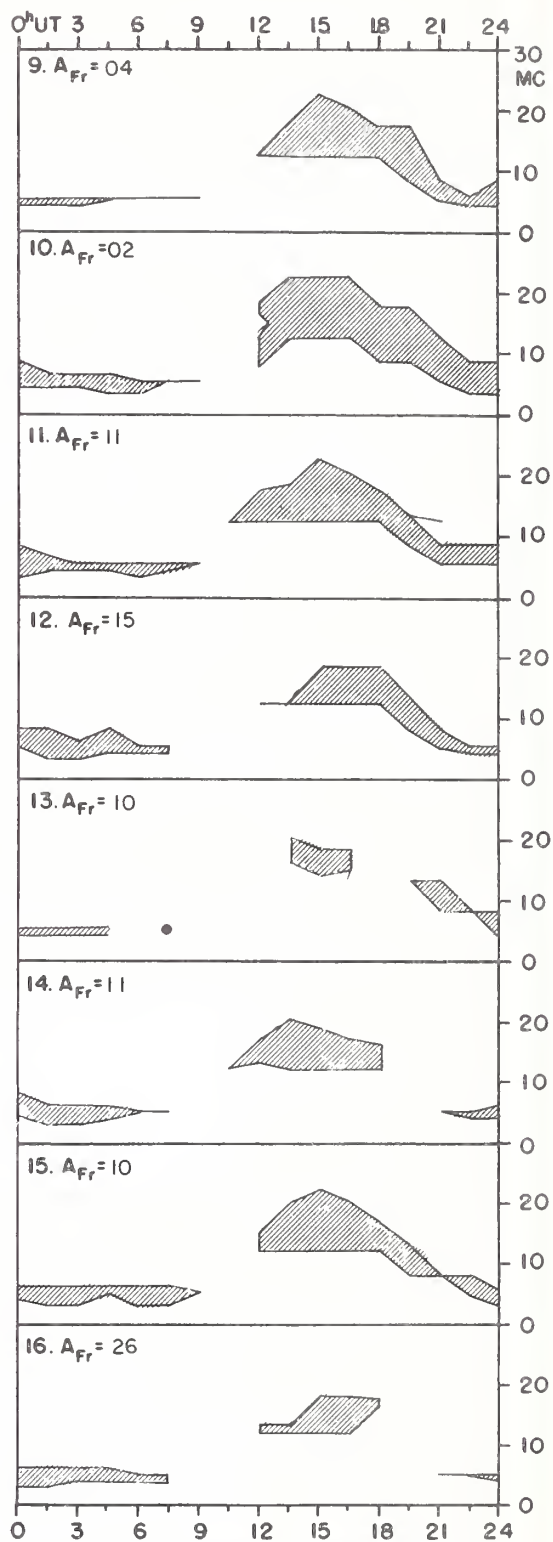
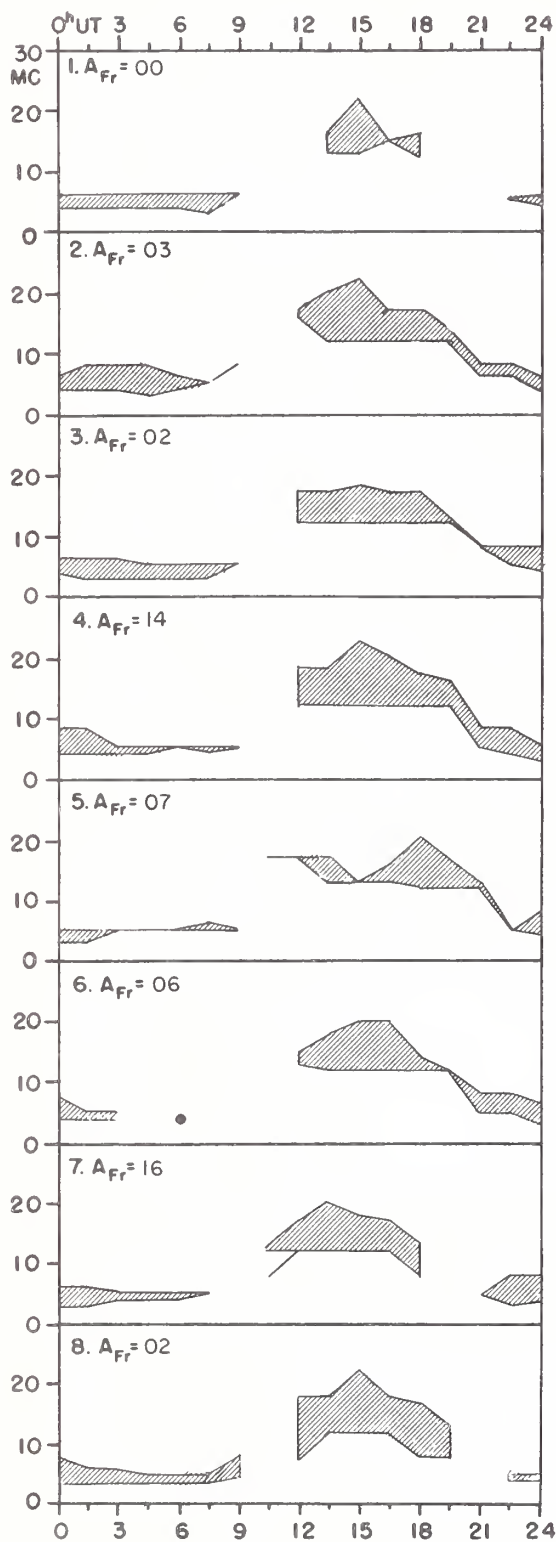


NORTH PACIFIC



USEFUL FREQUENCY RANGES -- NORTH ATLANTIC PATH

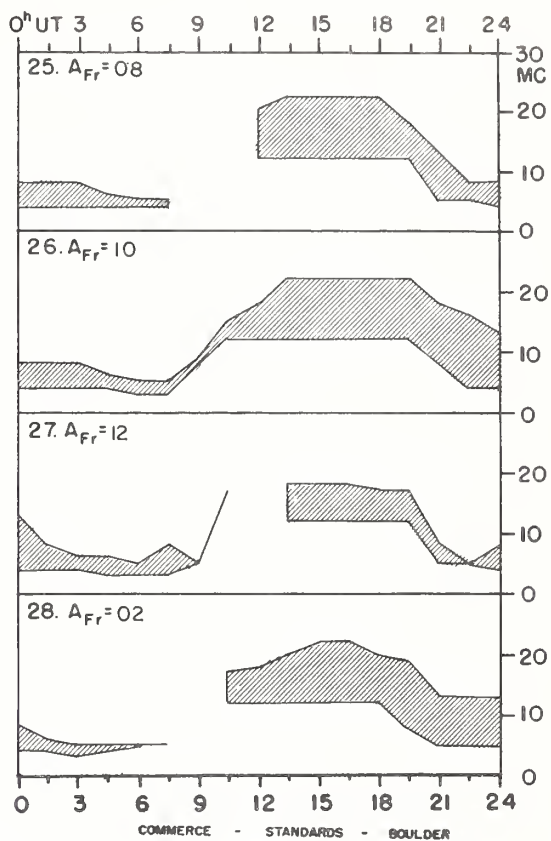
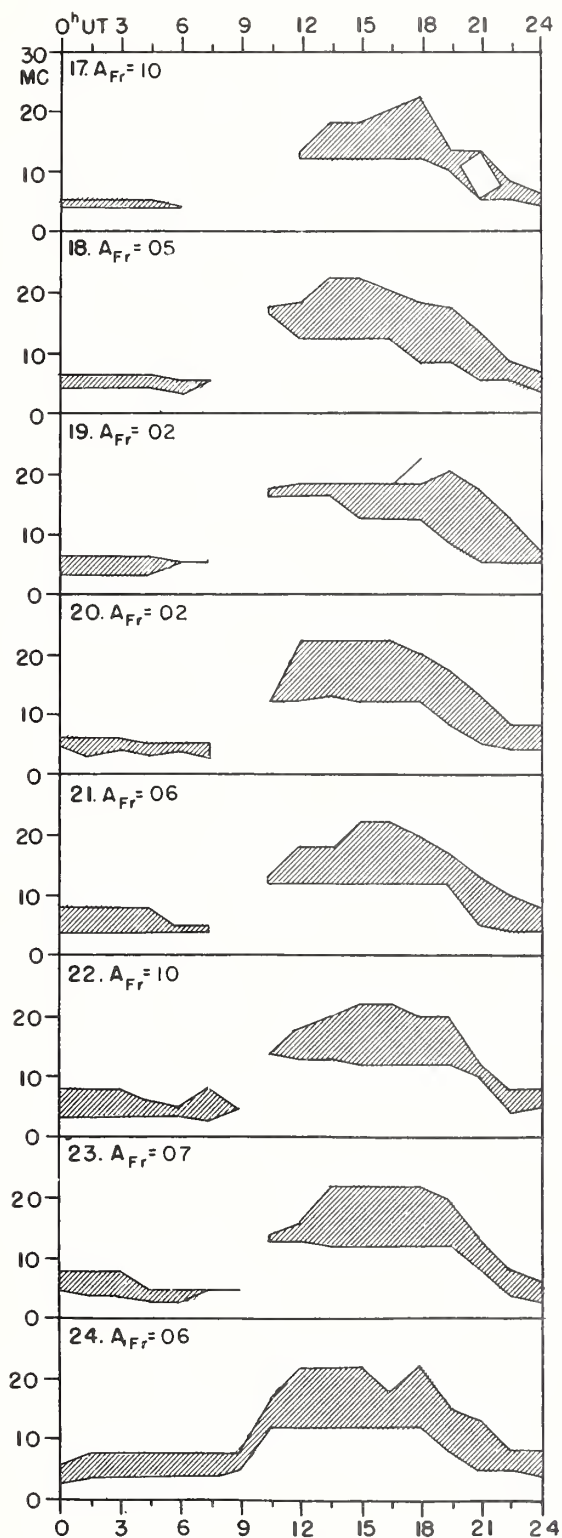
FEBRUARY 1962



COMMERCE - STANDARDS - BOULDER

USEFUL FREQUENCY RANGES -- NORTH ATLANTIC PATH

FEBRUARY 1962



Adapted from Observations by Deutsches Bundespost

INTERNATIONAL WORLD DAY SERVICE

MARCH 1962

Issued March 1962 Day/Time U.T.	Advance Geophysical Alert	No.	World-Wide Geophysical Alert	Special World Intervals
01/1710	McMath, Solar Flare, Two Plus 01/1640Z			
02/1600		162		Start (Predicted)
03/1600		163		Finish (Predicted)
06/1600		164	Magnetic Storm, 06/02XXZ	
13/1855	Climax Solar Flare, One Plus, 13/1502Z			
23/0320	Sac Peak, Solar Flare, Two, 22/2235Z			
25/1730	Sac Peak, Solar Flare, Two, 25/1406Z			
31/1735	Lockheed, Solar Flare, Two 31/1545Z			

